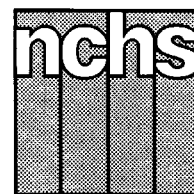


Monthly Vital Statistics Report



Final Data From the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

Advance Report of Final Natality Statistics, 1992

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Highlights

Births in the United States declined for the second consecutive year in 1992, to 4,065,014. The most recent high point was the 1990 total, 4,158,212, which was the largest number reported since 1962. The 1992 birth rate was 15.9 live births per 1,000 population, and the fertility rate was 68.9 live births per 1,000 women aged 15–44 years; these measures were 3–5 percent below the 1990 rates. Provisional data indicate that these measures of fertility continued to decline in 1993.

The birth rate for teenagers 15–17 years may have reached a turning point in 1992, with the rate declining 2 percent, following a 27-percent increase reported during 1986–91. Nevertheless, the 1992 rates for this age group were still almost as high as the rates reported nearly two decades ago. It appears that the teenage pregnancy rate may have fallen in 1992, based on recently reported declines in the teenage abortion rate combined with the declines in birth rates.

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The substantial increases in birth rates for women in their thirties measured since the mid- to late 1970's appear to have stopped. These rates have stabilized in 1991 and 1992. Still a record number of babies were born to women aged 30–34 years, nearly 900,000. Births to women aged 35–44 also were at record levels.

Birth rates for women in their twenties, the peak childbearing years, declined by 1 percent. These rates had fallen in the early 1980's and then increased, but the net effect was little change in rates from 1980 to 1992. The number of births to these women in 1992 was 3 percent below the 1991 total.

Wide disparities were reported in birth rates for racial and Hispanic subgroups. Generally, rates were highest for Hispanic (especially Mexican) and black women, followed by American Indian, Asian, and white women. The variations by age within each group were also substantial. Rates declined or changed little for most racial and Hispanic groups.

Births to unmarried mothers hit record levels again in 1992, but the increase from 1991 was the smallest since 1983. The 1992 total number was 1,224,876, and the birth rate was 45.2 per 1,000 unmarried women aged 15–44 years, unchanged from 1991. Thirty percent of U.S. births were to unmarried women, including 23 percent of white births and 68 percent of black births. The lowest proportions were among Asian women, 15 percent as a group. Among Hispanic women, the proportion was 39 percent.

More than 40 percent of women giving birth in 1992 had at least some college education and 19 percent were college graduates. There were wide variations in educational attainment for racial and Hispanic subgroups, with the proportions completing high school ranging from 46 percent of Hispanic women to 98 percent of Japanese women.

Weight gain during pregnancy provides important insights into the nutrition of pregnant women and is directly associated with infant birthweight. Median weight gain was 2.1 pounds higher for white than for black mothers, and very low weight gains of less than 16 pounds were nearly twice as frequent for black as for white mothers (15.8 percent compared

with 8.3 percent). Among other racial groups, Chinese mothers were least likely to have a weight gain of less than 16 pounds (7.0 percent) and American Indian mothers were most likely (14.0 percent). Mothers in their late twenties and early thirties were at smallest risk of a very low weight gain, and mothers aged 40–49 were at highest risk.

Data on medical risk factors show that, of all racial and Hispanic-origin groups, American Indian mothers had the highest reported rates for anemia, diabetes, pregnancy-associated hypertension, and uterine bleeding; all of which complicate pregnancy and compromise pregnancy outcome. The rates for Chinese mothers were among the lowest for these factors, except for diabetes, for which their rate was comparable to the level for American Indians.

Cigarette smoking by pregnant women declined in 1992 for the third consecutive year, to 16.9 percent (1–3); 17.9 percent of white mothers and 13.8 percent of black mothers smoked during pregnancy. Asian and Hispanic women generally have much lower smoking rates, an average of 5–6 percent. The strong association between maternal cigarette smoking and reduced infant birthweight persists. In 1992, 11.5 percent of babies born to smokers weighed less than 2,500 grams at birth compared with 6.3 percent of births to nonsmokers. An estimated 40,000 fewer infants would have been born with low birthweight if their mothers did not smoke.

The proportion of mothers beginning prenatal care in the critical first trimester rose for the first time in more than a decade, to 78 percent in 1992. This is the highest level ever reported. The proportion whose care was delayed until the third trimester or who had no care at all fell to 5 percent.

Electronic fetal monitoring was used on more than 3,000,000 births, or 77 percent of the total in 1992, the third consecutive year of increase in this procedure, from 68 percent in 1989. Ultrasound was the second most commonly reported obstetric procedure, at 58 percent.

The proportion of births delivered by physicians in hospitals declined again in 1992, as it has since 1975, to 94.2 percent,

while midwife-attended deliveries in hospitals rose to 4.4 percent of all births.

The national cesarean rate declined again in 1992, to 22.3 percent of all births compared with 22.8 percent in 1989. In 1992 the highest rates were for women aged 35–39 years having their first child and women in their forties having their first or second child. Teenagers were least likely to have a cesarean delivery.

The frequency of vaginal birth after a previous cesarean delivery continued to increase, to 22.6 percent of births to mothers with a previous cesarean, 20 percent higher than the rate of 18.9 percent in 1989. Forceps deliveries continued to decline in 1992 (4.3 percent of births), while vacuum extraction continued to increase (4.8 percent of births).

The steady decline in the average number of births on Saturdays and Sundays compared with the daily average continued in 1992, with the Sunday deficit increasing to 21 percent and the Saturday deficit, to 15 percent. The weekend deficit is far greater for cesarean births, particularly repeat cesareans, than for vaginal births. The growing deficit of both vaginal and cesarean deliveries on weekends is associated with the increased use of induction of labor on weekdays. There were 11 percent more births on Tuesdays, the peak day of occurrence, than the daily average.

The proportion of babies born preterm (less than 37 completed weeks of gestation) declined slightly to 10.7 percent in 1992. All of the improvement occurred among black births, with the preterm rate declining from 18.9 to 18.4 percent, while the proportion for white births remained at 9.1 percent. The preterm level for black births was the lowest since 1987; between 1987 and 1991, this proportion had increased from 18.4 to 18.9 percent.

The incidence of low birthweight (less than 2,500 grams) remained at 7.1 percent in 1992, the highest level reported since 1978. There has been no improvement in this important predictor of infant survival. Black babies continue to be at twice the risk of low birthweight as white babies, 13.3 percent compared with 5.8 percent, although there was a small decline in the low birthweight rate for black infants (from 13.6 percent).

The rate of occurrence of Down's syndrome per 100,000 live births was twice as high for women aged 30–34 years as for teenagers, 56.0 compared with 28.9, and 12 times as high for women aged 40–49 years, 343.0. Congenital anomaly rates for live births were higher for black than for white births for only 4 of the 20 anomalies identified on birth certificates. The racial differential is particularly noticeable for polydactyly/syndactyly/adactyly (extra, malformed, or missing fingers or toes), for which the rate for black births was nearly four times the rate for white births, 217.3 compared with 58.8.

The number of plural births, especially triplets and higher-order plural births, increased in 1992, more than in any previous year. Most of the increase was among mothers aged 30 years and over and among white mothers.

Introduction

This report, the annual release of national birth statistics, has been entirely redesigned for the 1992 data year. In the previous 3 years, birth statistics were published in two separate reports—one focusing on demographic characteristics and some limited maternal and infant health data and the other on the new maternal and infant health data items from the 1989 revision of the U.S. Standard Certificate of Live Birth. For 1992 these two reports have been fully integrated into one publication. Detailed data are shown in this report for American Indian, Asian or Pacific Islander, and Hispanic women, including births and birth rates, as well as the various maternal and infant health measures. In addition, all tables showing trends in births, birth rates, and characteristic of

births present data tabulated by race of mother for all years beginning with 1980. Details of the tabulation of birth data by race are described in the "Technical notes."

Demographic characteristics

Births and birth rates

There were 4,065,014 babies born in the United States in 1992, 1 percent fewer than in 1991 (4,110,907). It was the second consecutive year of decline, also 1 percent between 1990 and 1991. During the latter half of the 1980's, U.S. births had increased by 11 percent, following a period from 1980 to 1985, during which the annual number of births varied by 2 percent or less (table 1 and figure 1). Provisional data for 1993 indicate that the

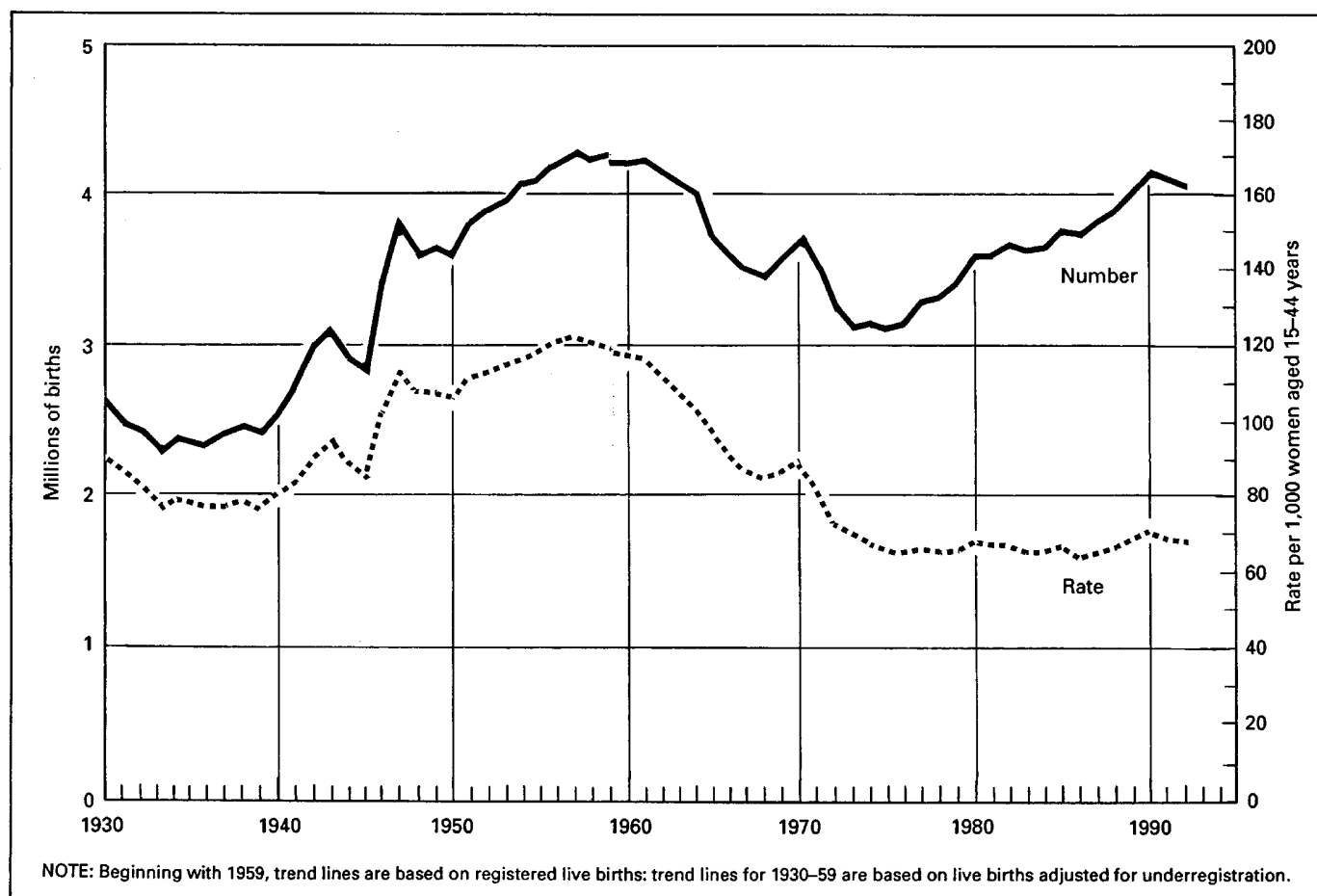


Figure 1. Live births and fertility rates: United States, 1930–92

number of births declined again, by about 1 percent.

The birth rate for 1992 was 15.9 live births per 1,000 total population, 2 percent lower than in 1991 (16.3) and 5 percent below the 1990 rate (16.7). The 1992 rate was lower than in any year since 1987; provisional data for 1993 suggest an additional decline of about 1 percent in the birth rate.

In 1992 the fertility rate was 68.9 live births per 1,000 women aged 15–44 years, a 1-percent decline from the rate for 1991 (69.6) and 3 percent lower than in 1990 (70.9). The 1990 rate had been

the highest reported since 1972, following a steady period of increase amounting to 8 percent between 1986 and 1990. Provisional reports indicate that the fertility rate continued to fall in 1993, by about 1 percent.

Age of mother—Birth rates by age of mother declined 1–2 percent for teenagers 15–17 years and for women in age groups 20–24 and 25–29 years; rates for women in age groups 30–44 years increased 1–7 percent. Rates for young teenagers 10–14 years and women aged 18–19 and 45–49 years were virtually unchanged. (Numbers and rates by age

and live-birth order are shown in tables 2–5.)

After a period of consistent annual increases in birth rates for teenagers 15–17 years from 1986 to 1991, amounting to 27 percent overall, it appears that 1992 may mark a turning point (table 4 and figure 2). The birth rate for teenagers 15–17 years declined 2 percent, to 37.8 per 1,000. This rate ranged between 31 and 34 per 1,000 during 1976–85, following a 12-percent decline from 1970 to 1976. The 1992 birth rate of 37.8, although lower than in 1991, was still higher than in any other year since 1973 (38.5).

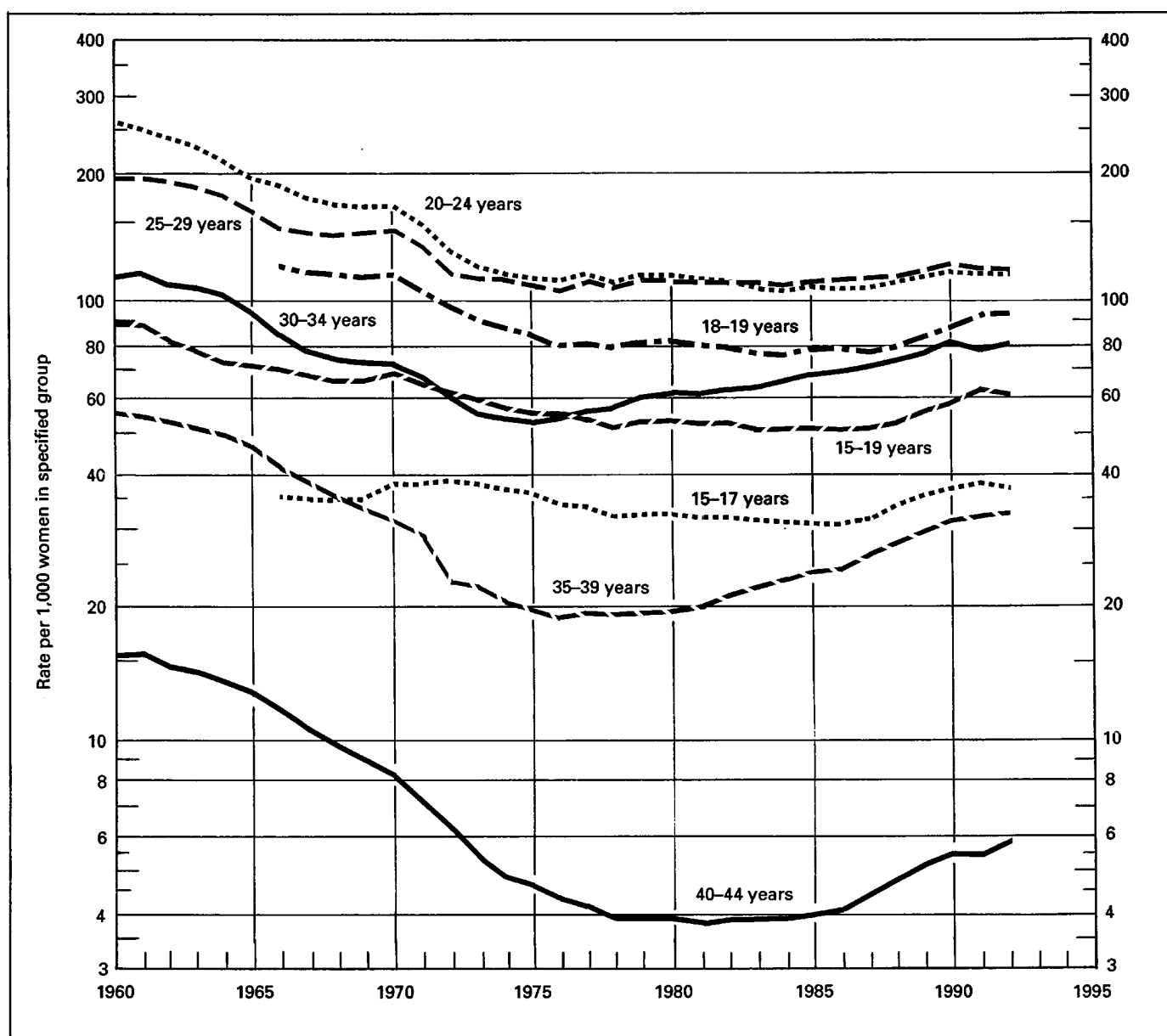


Figure 2. Birth rates by age of mother: United States, 1960–92

The 2-percent drop from 1991 to 1992 in the birth rate for teenagers 15–17 years was enough to produce a small decline in the number of births for this age group (187,549 in 1992); the decline in the number of births would have been larger had there not been a 2-percent increase in the number of teenagers between 1991 and 1992, reversing a 5-year period of decline in this population (4,5).

The birth rate for older teenagers increased less than 1 percent, to 94.5 per 1,000 in 1992. The rate for these young women had also risen sharply between 1986 and 1991, by 19 percent; between 1990 and 1991 alone, the rate increased 7 percent. After falling rapidly by 30 percent between 1970 and 1976, the rate for older teenagers had been fairly stable until the late 1980's, ranging from 77 to 82 per 1,000. The rate for 1992, as for 1991, was higher than in any year since 1972, when it was 96.9 (table 4).

Although the birth rate for women aged 18–19 rose slightly in 1992, the number of births to these women fell by 4 percent, to 317,866 in 1992. This reflected the 4-percent decline in the number of women in this age group; these women were born in 1973–74, when total births in the United States fell to historic low levels.

Birth rates for women in their twenties, the principal childbearing ages, declined by 1 percent in 1992. Rates for these women had declined 4–7 percent from 1980 to 1984 and then had risen by 8 percent between 1986 and 1991, resulting in little net change over the decade (table 4 and figure 2). The relative stability in the birth rates for these women is the main factor accounting for the small changes in the general fertility rate since 1980.

Women in their thirties have shown the longest-lasting and most persistent increase in birth rates. However, rates for women 30–34 years rose by just 1 percent in 1992, following a 2-percent decline in 1991. It appears that 1991 marked a turning point, halting the previous considerable annual increases in birth rates since the mid-1970's: The rate for women aged 30–34 years rose 31 percent between 1980 and 1990 and 54 percent from 1975 to 1990 (80.8), but then declined to 80.2 in 1992. Even the

modest 1-percent increase between 1991 and 1992 was enough to produce a 1-percent increase in the number of births in 1992 to 895,271, the highest number ever recorded. The 1992 total was more than double the number reported in 1973 (369,976), when the trend to making up for previously delayed childbearing was just underway (6).

The birth rate for women aged 35–39 years increased 2 percent in 1992, to 32.5 per 1,000; the rate had increased just 1 percent in the previous year. The 3-percent overall rise from 1990 to 1992 follows a 60-percent increase over the period 1980–90, the sharpest rate of increase observed for any age group. The 3-percent increase in the number of women in this age group between 1991 and 1992 combined with the 2-percent rise in the birth rate produced a 4-percent increase in the number of births to these women in 1992, to 344,644, the highest annual total since 1961.

Birth rates for women in their forties, although much lower than for any other group (except teenagers under 15 years), have also risen substantially since 1980, by 50–51 percent. The rate for women aged 40–44 years was 5.9 in 1992, 7 percent higher than in 1991 (5.5). Reflecting mainly this increase as well as a slight increase in the number of women in this age group, the number of births to women aged 40–44 years rose 7 percent, to 55,702, the highest number since 1968.

The leveling off of the sharp rate of increase in teenage childbearing during the 1980's may reflect a similar leveling off since 1988 in the proportion of teenagers who are sexually active, especially among the younger teenagers (7). In addition, other survey data suggest that sexually-active teenagers are more likely to be using some contraception regularly (8).

According to recently published data, it appears that abortions among teenagers have also declined in recent years (9). Thus the decline in teenage birth rates in 1992 would indicate that the teenage pregnancy rate has declined as well, following increases from the mid-to late 1980's (10).

Another factor that has been linked to the rise in the teenage birth rate has been the growing proportion of white teenage births that are to Hispanic

teenagers, 31 percent in 1992 (basic data in tables 2, 6, and 7). Hispanic women have much higher fertility than white non-Hispanic women at all ages, but particularly in the teenage years. For example, the rate for Hispanic teenagers 15–19 years was 107.1, and for white non-Hispanic teenagers it was 41.7. Although the birth rate for Hispanic teenagers had risen in recent years, just as it had for non-Hispanic teenagers, in 1992 the rate for Hispanic teenagers rose less than 1 percent, and for white non-Hispanic teenagers the rate declined 2 percent. The net effect of these modest changes was a decline in the teenage birth rate.

Since 1986, trends in the numbers of Hispanic and white non-Hispanic teen-aged women have diverged. During this period the number of Hispanic teenagers 15–19 years rose 13 percent, while the number of white non-Hispanic teenagers fell 15 percent (4,5). These diverging trends have contributed to the rising proportion of the white teenage population that is Hispanic, from 11 percent in 1986 to 14 percent in 1992 (4,5). Because the birth rates for white teenagers are increasingly affected by the much higher birth rates for Hispanic than for non-Hispanic women, these population patterns will likely keep the number of births to U.S. teenagers at a high level.

Since 1988, teenagers have accounted for 13 percent of all births in each year. This proportion held steady in 1992 as a result of a combination of factors. Although birth rates for teenagers as well as for women in their twenties declined, these declines were only partially offset by small increases in rates for women aged 30 years and older. In addition, the teenage population that had been declining has begun to increase slightly for ages 15–17 years, while the number of women in their twenties has declined. The major increase in population among women of childbearing age is for those aged 35–49 years, which increased by up to 9 percent between 1991 and 1992, due to the continued aging of women in the "baby boom" generation (4,5).

The recent trends in childbearing at older ages reflect the patterns of childlessness among American women. About 1 in 5 women who were aged 35 years at the end of 1992 were childless. This

proportion has changed little during the early 1990's but has risen sharply from levels observed in the mid-1970's; the proportion was about 1 in 9 in 1975. Despite the high current levels of childlessness among women in their thirties, the majority of those who are currently married indicate in surveys that they expect to have at least one child (11). This would indicate that birth rates for all women in their thirties would continue to rise, albeit slowly. However, a factor which may be limiting the realization of the expectations of these women is the extent of fertility impairment. According to data from the National Survey of Family Growth (NSFG), one-third of childless wives aged 35–44 were reported to have impaired fertility in 1988 (12).

Women who are making up for previously postponed childbearing are disproportionately well-educated. (See also later section on educational attainment.) In 1992, 49 percent of women aged 30–49 years having their first child were college graduates, twice the proportion in the general population, which was 24 percent for women in this age group in 1992 (13).

It appears that as the smaller numbers of women under 25 years of age replace the much larger numbers of women aged 25–44 years, the total number of births will decline, unless birth rates for women in their twenties, the principal childbearing ages, increase considerably. This seems unlikely, however, because rates for women in their twenties have declined 2 percent since 1990, following a decade of relatively little net change. Moreover, the coming shifts in the numbers of women in each of the childbearing age groups are also likely to exert a downward pressure on the total number of births. The largest numbers of women are aged 30–44 years. As these women get older, their risk of giving birth—as measured by the birth rate—declines very sharply. In contrast, although women aged 20–29 have the highest birth rates, the number of women in their twenties will continue to decline over the next few years.

Live-birth order—Birth rates declined by 2 percent or less for first-through fourth-order births, while the rates for fifth-, sixth-seventh-, and eighth- and higher-order births were unchanged

(tables 3 and 5). Between 1990 and 1992, rates for first-, second-, and fourth-order births declined 3–4 percent, reversing a pattern of increase from 1987 to 1990.

While the first-birth rate declined 2 percent overall, the declines were largest for women in age groups 15–24 years. The 3-percent drop in the first-birth rate for teenagers marks a reversal of the sharp upward trend in this rate from 1986 to 1991, when the rate rose 20 percent. The previous upward trend halted for both younger and older teenagers; the first-birth rate for teenagers 15–17 declined 3 percent following a 24-percent increase, while the rate for teenagers 18–19 years dropped 1 percent after a 14-percent increase. In the case of teenagers, the decline in the first-birth rate is particularly important, because it indicates that the proportion of teenagers who became mothers for the first time has declined.

First-birth rates for women in their thirties rose 1 percent in 1992. These rates had changed little in 1991 as well. Between 1986 and 1990, however, these rates had increased 20–43 percent. The slowdown in these rates is an important indication that the trend to making up for previously postponed childbearing has leveled off.

Second-order birth rates changed little, except for a 2-percent rise for women aged 18–19 and for women in their thirties. Changes in other rates specific for age and live-birth order were generally small for women aged 15–34 years.

Births by race—Beginning with this report, birth data compiled by the National Center for Health Statistics (NCHS) for 1980–88 have been retabulated by race of mother as reported directly on the birth certificate. This is to be consistent with data by race already available for the years since 1989 when NCHS first began to tabulate births by race of mother. Before 1989, birth tabulations had been by race of child, as determined by an algorithm based on information reported for the mother and the father. Details of current and former procedures for tabulating births by race are described in the “Technical notes.”

In this report, discussion and analysis of changes in rates and various other measures are based on rates and measures

computed by race of mother. Text references to white births and white mothers or black births and black mothers, for example, are used interchangeably for ease in writing. Births and detailed birth rates by age of mother and live-birth order are presented for American Indian (including Aleut and Eskimo) and Asian or Pacific Islander women for the first time in this report (tables 2–4 and 8). The subgroups comprising the Asian or Pacific Islander category include Chinese, Japanese, Filipino, Hawaiian, and “Other” Asian persons. Trends in the numbers of births and birth and fertility rates for American Indian and Asian women for 1980–92 are shown in table 1.

The fertility rate for white women was 66.5 live births per 1,000 women aged 15–44 years, 1 percent lower than in 1991 and 3 percent below the 1990 rate of 68.3 (table 1). The rate for black women was 83.2 in 1992, 2 percent lower than in 1991 and 4 percent below the 1990 rate of 86.8. The rate for American Indian women increased by less than 1 percent, to 75.4. The fertility rate for Asian or Pacific Islander women declined 1 percent, to 67.2. Although fertility rates for white and black women in 1992 were very similar to the rates in 1980, this was not the case for American Indian and Asian women whose rates were 8–9 percent lower in 1992 than in 1980.

Although fertility rates for American Indian and Asian women have declined since 1980, there have been large increases in the numbers of births to these women, 34 percent and 102 percent, respectively. These disparate trends reflect the impact of the very large increases in the number of persons reported in these racial groups, 51–124 percent between 1980 and 1992 (4,5). Births to American Indian and Asian mothers, as well as births to Hispanic mothers, tend to be highly concentrated geographically (tables 8 and 9). For example, more than half the births to American Indian mothers were to residents of five States: Alaska, Arizona, California, New Mexico, and Oklahoma. Similarly, residents of California, Hawaii, and New York accounted for 57 percent of all Asian or Pacific Islander births.

The 1-percent decline in the fertility rate for white women reflects mainly a 1-percent decline in the rate for white

married women; the rate for white unmarried women increased 2 percent. The 2-percent reduction in the fertility rate for black women reflects declines of 1 percent in rates for married and 3 percent for unmarried women.

Birth rates by race for women under 25 years of age differ substantially. Among teenagers, the rate was highest for black, 112.4 per 1,000 aged 15–19 years, followed by American Indian, 84.4; white, 51.8; and Asian or Pacific Islander teenagers, 26.6 (table 4). The disparity is greatest for teenagers 15–17 years, for whom the highest rate, 81.3 (black), was more than five times the lowest rate, 15.2 (Asian). Teenage birth rates for all racial groups show a very similar trend, however, in that rates increased considerably beginning in the mid-1980's, after declines in the earlier part of the decade. The impact of these variations in teenage birth rates is reflected in the proportions of all births in each racial group that are to teenage mothers (table 10).

The rates for women aged 20–24 years were highest for black and American Indian women, followed by white and Asian women. Rates by race are most similar at ages 25–29 years, ranging from 109 to 121 per 1,000.

Rates for women in their thirties show a reversal of the teenage pattern. The rate for Asian women aged 30–34 was highest, at 103.0, 27 percent above the rate for white women (81.4) and 53–63 percent above the rates for black and American Indian women (67.5 and 63.0, respectively). This pattern continued for women aged 35 years and older, with rates for Asian women at least 57 percent higher than rates for any other racial group. The tendency to make up for previously postponed childbearing is very evident among white women aged 30 years and older and Asian women 35–44 years. The disparities in birth rates by age for Asian or Pacific Islander subgroups have been reported elsewhere (14).

First-birth rates by race, although similar for all ages combined, differ sharply by age. Among teenagers, rates are highest for black and American Indian, followed by white teenagers. The first-birth rates for Asian teenagers are very low, one-third to one-half the rates

for other racial groups. At ages 30 and older, the patterns shift completely. For example, the first-birth rate for Asian women aged 30–34 years, 36.0, was 64 percent higher than the rate for white women and more than four times the rate for American Indian women. The disparities in birth rates by age and birth order are again reflected in the widely varying proportions of teenage births and fourth- and higher-order births (table 10). These demographic measures provide important information on fertility patterns for Asian or Pacific Islander subgroups for whom birth rates can be computed only in census years.

Between 1991 and 1992, only the first-birth rate declined for white women, by 2 percent. Rates for all other orders were unchanged. For black women, however, the declines in rates by birth order extended from first- through fourth-order births (3 percent).

Hispanic origin—The fertility of Hispanic women, particularly Mexican women, continues to be the highest of any racial or ethnic group for whom rates can be reliably computed. In 1992 the Hispanic fertility rate was 108.6 per 1,000 women aged 15–44 years, 69 percent higher than the rate for non-Hispanic women as a group (tables 7 and 11). Rates by race for non-Hispanic women were 60.2 for white women and 85.5 for black women. These levels are very similar to those reported for 1991; the rates for Hispanic and white non-Hispanic women increased by less than 1 percent, while the rate for black non-Hispanic women declined 1 percent. The levels and trends in rates for Hispanic subgroups varied widely. The rate for Mexican women, 116.0, was 5 percent lower than in 1991. The rate for Puerto Rican women increased 11 percent, to 89.9, while the rate for “Other” Hispanic women rose 8 percent, to 107.0. The rate for Cuban women increased from 49.1 to 50.3.

The Hispanic population is characterized by substantial geographic concentration as noted above. In 1992, 61 percent of Hispanic births were to California or Texas residents (table 9). Another 25 percent of Hispanic-origin births were to residents of Arizona, Florida, Illinois, New Jersey, New Mexico, and New York. Moreover,

Hispanic mothers accounted for at least 30 percent of the births in four States: Arizona, California, New Mexico, and Texas.

Birth rates for Hispanic women were higher at each age than rates for non-Hispanic women. This pattern is also observed for Puerto Rican and “Other” Hispanic mothers under 25 years of age and for “Other” Hispanic women aged 25 and older. Rates for Cuban women under 30 years of age were well below those for other Hispanic or non-Hispanic groups; at ages 30 years and older, the rates are more comparable. The generally elevated age-birth order-specific birth rates for Hispanic women at all ages is the major factor behind the high proportions of births to teenage mothers (except Cubans) and the high proportions of births of fourth and higher order (table 11).

Birth rates for Hispanic women increased 1–2 percent in age groups 15–19 years through 40–44 years between 1991 and 1992. Age-specific rates generally increased for Puerto Rican, Cuban, and “Other” Hispanic women by at least 4 percent, while rates for Mexican women declined by 1–7 percent. Rates for non-Hispanic women by race generally declined for women under 25 years of age by up to 3 percent, while most rates for women aged 30–44 years rose 3–8 percent. The rates for women aged 25–29 years changed 1 percent or less.

Total fertility rate—The total fertility rate indicates the number of births that 1,000 women would have if they experienced during their childbearing years the age-specific birth rates observed in a given calendar year. It is a hypothetical measure that shows the potential impact of current fertility levels on completed family size. The total fertility rate is age adjusted because it is computed from age-specific birth rates; it assumes the same number of women in each age group.

The total fertility rate in 1992 was 2,065.0, less than 1 percent below the rate for 1991 (2,073.0). The rate has now declined for 2 years, following 4 consecutive years of increase amounting to 13 percent (table 4). The continued decline in the rate from 1990 to 1992 reflects the 1–2 percent reductions in

rates for women aged 20–34 years, which were only partially offset by increases in rates for younger and older women. The rate of 2,065 is still about 2 percent below the “replacement” level rate (2,100), which is the level considered necessary for a given generation to exactly replace itself in the population over the long run. The U.S. total fertility rate has been below replacement level for more than two decades.

Total fertility rates for white and Asian women were very similar, at 1,993.5 and 1,942.0, respectively. The rate was highest for black women, at 2,442.0, followed by the rate for American Indian women, 2,190.0 (table 4).

Between 1980 and 1992, the total fertility rates for white and black women each increased by 12 percent. The rate for American Indian women rose by 1 percent, while the rate for Asian women declined by 1 percent.

Hispanic women as a group had the highest total fertility rate of any racial or ethnic group for whom the rate can be computed; the rate in 1992 was 3,043.0 (table 11). There was wide variation in this measure for the Hispanic subgroups, ranging from 1,485.5 (Cuban) to 3,196.5 (Mexican). These levels and variations were observed in 1990–91 as well (14,15).

Births by State

The number of births declined in 37 States and the District of Columbia and increased in 13 States in 1992. (See tables 8 and 9 for 1992 data.) Numbers declined by up to 2 percent in 30 States. The number declined by 4–7 percent in Delaware, Maine, Michigan, and the District of Columbia.

The birth rate per 1,000 total population declined in 46 States and the District of Columbia. Changes in the other four States were 1 percent or less. The rate declined by 4–7 percent in Delaware, the District of Columbia, Maine, Michigan, Missouri, South Carolina, and Vermont.

The fertility rate per 1,000 women aged 15–44 years also declined in most States. Declines were reported in 39 States and the District of Columbia. Rates increased in nine States, but most increases were 1 percent or less. Rates

were unchanged in two States. Declines of 4–5 percent were reported for Delaware, Maine, Michigan, and the District of Columbia.

The numbers of births by race of mother and by Hispanic origin of mother for each State are shown in tables 8 and 9. It is apparent from these tables that births to American Indian, Asian, and Hispanic mothers are concentrated in relatively few States.

Sex ratio

The sex ratio is the number of male babies born per 1,000 female babies. This ratio was 1,050 in 1992 (table 10), a number around which it has fluctuated only slightly in the last 50 years. For specified racial categories, the sex ratio was highest for Asian or Pacific Islander mothers (1,065), intermediate for white (1,053) and black (1,036) mothers, and lowest for American Indian mothers (1,034). There were large disparities in the sex ratio for Asian subgroups, ranging from 1,049 for Japanese mothers to 1,083 for Filipino mothers. The sex ratio was generally higher for non-Hispanic (1,052) than for Hispanic women (1,041), but this was not always the case when detailed Hispanic and non-Hispanic groups were compared (table 11). The ratio for non-Hispanic white mothers (1,056) was higher than most Hispanic categories but lower than the ratios for Puerto Rican (1,057) and Cuban (1,079) mothers. The ratio for non-Hispanic black mothers (1,036) was lower than all Hispanic categories except mothers of “Other” or unknown Hispanic origin (1,030).

Month of birth

In 11 of the 12 months of 1992, monthly birth and fertility rates were below the rates observed in 1991; only in June were the rates slightly higher. Continuing a pattern observed for many years, the peak months of occurrence of births in 1992 were July, August, and September (table 12). When the seasonal component is removed from the monthly birth and fertility rates, the underlying trends can be observed. Like the 2 previous years, seasonally-adjusted birth and fertility rates for the first half of 1992 were, on average, higher than the rates for the second half of the year.

Provisional data for 1993 suggest a continuation of this pattern. All months except June had the lowest seasonally-adjusted birth rates in at least 3 years, while August, September, and November showed the lowest rates since 1988.

Day of week of birth

Since 1980, the day of the week on which births occur has been tracked from entries on birth certificates. The daily pattern of births is measured by an index of occurrence. The index is defined as the ratio of the average number of births for a particular day of the week to the average daily number of births for the year, multiplied by 100. Thus, for the year 1992, the Sunday index of 78.8 (table 13) was obtained by relating the average number of births on Sundays (8,754) to the average daily number of births for the year (11,107) and multiplying by 100. The Sunday index of 78.8 is an indication that there were 21.2 percent fewer births on Sundays than the daily average.

From 1980 to 1991 there was a steady decline in births on Saturdays and Sundays. Between 1991 and 1992 this trend continued—the Sunday index declined from 79.7 to 78.8 and the Saturday index, from 85.3 to 84.8. In 1992, as in the past, Tuesday was the peak day of occurrence of births. The Tuesday index of 111.0 signifies that the average number of births on this day of the week was 11 percent higher than the daily average. These patterns are similar for white and black births, but the weekend deficit and concentration of births on weekdays are not as pronounced for black births (table 13).

The weekend deficit for cesarean deliveries, particularly repeat cesareans, is far more pronounced than for vaginal births. Although the Sunday deficit for vaginal births was 15 percent, the deficit for primary cesareans was 31 percent and for repeat cesareans, 60 percent. The Saturday deficit is similarly far higher for primary and repeat cesarean deliveries; for primary cesareans the deficit was 20 percent and for repeat cesareans, 54 percent, compared with 10 percent for vaginal births.

The growing deficit of vaginal births on weekends is associated with the increasing proportion that are induced

(from 9.1 percent in 1989 to 11.7 percent in 1992). This is because induction of labor is less likely on weekends than on weekdays. In 1992, 6 percent of vaginal births delivered on Sundays and 9 percent of those delivered on Saturdays were induced compared with 13 to 14 percent on Tuesdays through Fridays.

Part of the growing weekend deficit of births by cesarean delivery can also be explained by the rising trend in induction of labor. In 1992 a failed induction of labor preceded 14.3 percent of primary cesarean births, 13 percent higher than in 1989 (12.6 percent). Induction of labor preceding a primary cesarean is also less likely on weekends than on weekdays, similar to the daily pattern in induction found for vaginal births. Of the births by primary cesarean that occurred on Tuesdays through Fridays, labor was induced for approximately 15 to 16 percent compared with 10 percent on Sundays and 14 percent on Saturdays.

Births to unmarried women

In 1992, for the first time in 8 years, the rate of childbearing among unmarried women did not increase over the previous year (tables 14 and 15). The 1992 rate was 45.2 live births per 1,000 unmarried women aged 15–44 years. During the period 1984–91 this rate had increased 46 percent, or about 7 percent per year.

Continuing a pattern that has been observed for several years, childbearing by unmarried women increased for white women, while declining or remaining unchanged for black women. The nonmarital birth rate for white women was 35.2 per 1,000, 2 percent higher than in 1991 (34.6). This rate has nearly doubled since 1980 (18.1).

The rate for unmarried black women was 86.5 per 1,000, 3 percent lower than in 1991 (89.5) and 7 percent above the 1980 level (81.1). Whereas in 1980, the nonmarital birth rate for black women was 4.5 times the rate for white women; by 1992 the racial differential was 2.5, reflecting the substantially greater increases for white than for black women.

There was no consistent pattern in the changes in nonmarital birth rates by age. Declines of less than 1 percent were reported for teenagers 15–19 years and women aged 30–34 years. The rate for

women aged 20–24 years rose 1 percent and was unchanged for women aged 25–29 years. The birth rates for women aged 35–39 and 40–44 years increased 4–8 percent. The modest changes between 1991 and 1992 in rates for women under 35 years of age can be better appreciated when viewed in the context of the previous 7-year period, 1984–91, when nonmarital birth rates by age increased 49–65 percent, or 7–9 percent annually.

The nonmarital birth rate was highest for women aged 20–24 years (68.5), followed closely by women aged 18–19 (67.3) and 25–29 years (56.5). The rates for younger women 15–17 years and women aged 30–39 ranged from 19 to 38 per 1,000. Although most age-specific rates increased little or not at all, the modest increases in some rates brought them to the highest levels ever recorded in the United States (women aged 18–19, 20–24, and 35 years and older) (figure 3).

All birth rates for unmarried white women increased in 1992, except the rate for teenagers 15–17 years. The increases amounted to 1–4 percent for women under 35 years of age and 7–13 percent for older women. In contrast, most age-specific rates for black women declined, by 1–4 percent for women under 35 years of age. The rate for women aged 35–39 rose 1 percent and was unchanged for women in their forties.

The larger increases in 1992 in rates for women aged 35 and older—compared with younger women—somewhat resumes a pattern that had been observed from 1980 to 1990. As a consequence, the proportion of nonmarital births to teenagers has continued to decline, amounting to 30 percent in 1992. Women aged 25 and older accounted for 35 percent of the births.

The proportion of all births to unmarried mothers increased from 29.5 percent in 1991 to 30.1 percent in 1992. This measure, sometimes referred to as the ratio of births to unmarried women, is affected by trends in the number of births and the birth rate for married women as well as the trends in these measures for unmarried women. In 1992 total births and births to married women declined, while births to unmarried women rose; thus the proportion of all births that were to unmarried women

continued to rise, although slightly.

The proportions of births to unmarried women vary widely by race and Hispanic origin (tables 10 and 11), but there was little or no change in these proportions in 1992. In that year, the percent of births to unmarried women was lowest for Asian women as a group, 15 percent. Within that group, Chinese and Japanese women had the lowest proportions of nonmarital births (6–10 percent), followed by “Other” Asian (15 percent), Filipino (17 percent), and Hawaiian women (46 percent). The proportion for white women was 23 percent; for American Indian women, 55 percent; and for black women, 68 percent.

Proportions were generally higher for Hispanic women, at 39 percent overall. Again, there was wide variation among the Hispanic subgroups—20 percent of Cuban births, 36–38 percent of Mexican and other Hispanic births, 44 percent of Central and South American births, and 58 percent of Puerto Rican births. In accounting for the high proportions of nonmarital births in some Hispanic subgroups, it should be kept in mind that births to unmarried women include births to women in consensual or common-law marriages because these women are not legally married. Common-law marriages are relatively frequent among Hispanic women (16). To some extent, the variations by race and Hispanic origin in the proportions of nonmarital births reflect comparable variations in teenage birth rates and in the proportions of births to teenaged mothers (tables 3, 4, 7, 10, and 11).

The number of nonmarital births in 1992 totaled 1,224,876, the highest number ever reported, but only a 1-percent increase over the 1991 number (1,213,769). Nonmarital births increased especially sharply during the 1980–91 period, because the 66–86 percent increases in rates for women aged 25–39 coincided with very large increases (42–99 percent) in the number of unmarried women in those age groups (17). Between 1991 and 1992, increases in rates were reported for women 18–24 and 35–44 years. However, the number of unmarried women aged 18–24 years (the ages when nonmarital birth rates are highest) declined 1 percent, while the number for those aged 35–44 years (ages

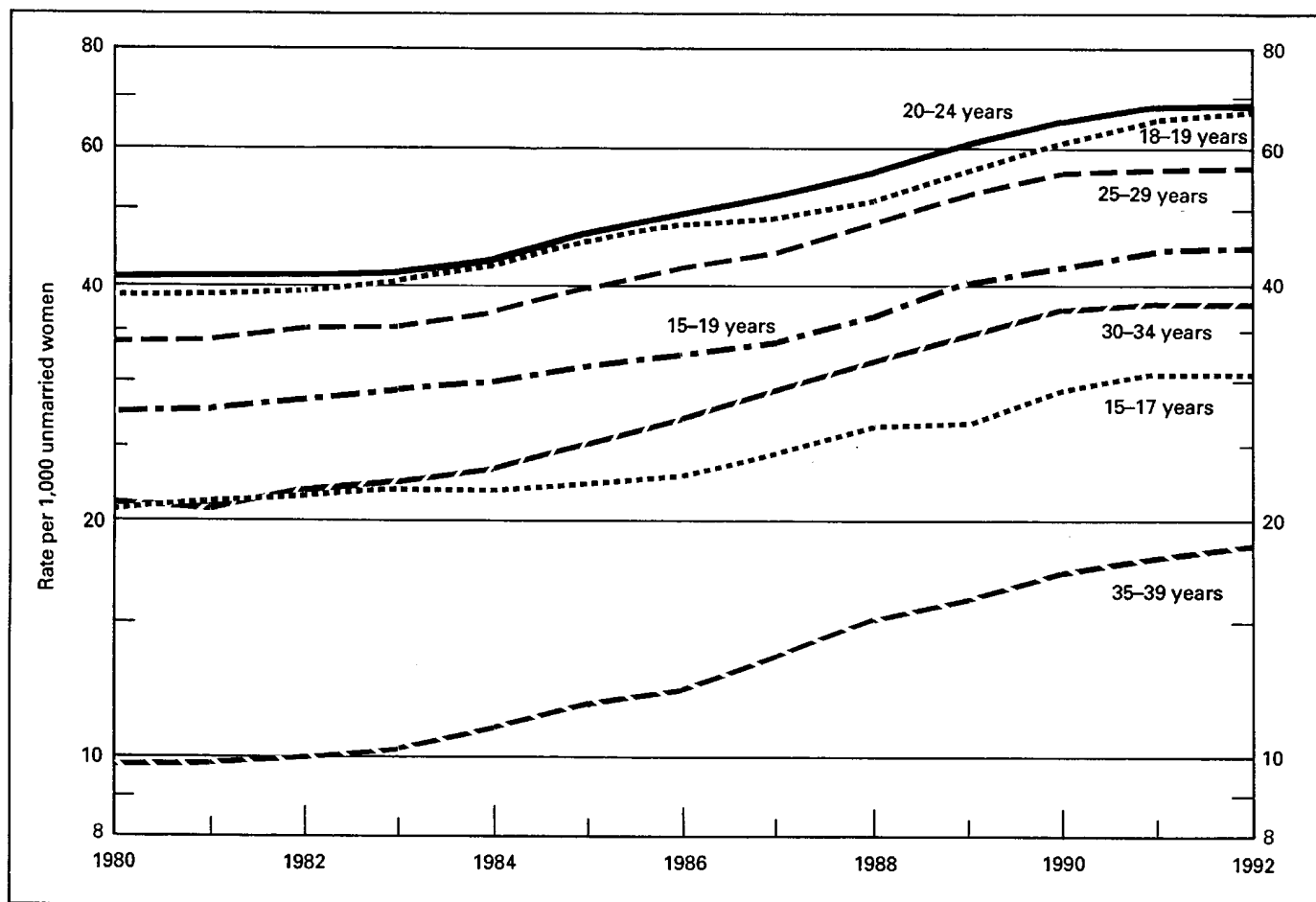


Figure 3. Birth rates for unmarried mothers by age of mother: United States, 1980-92

when rates are lowest) increased 2 percent. Thus, the number of nonmarital births rose only 1 percent in 1992 compared with previous annual increases of 7 percent from 1980 to 1991.

Levels of nonmarital childbearing vary widely by State. The number and percent of births to unmarried women by race for each State are shown in table 16. The numbers of nonmarital births increased in all but eight States and the District of Columbia. The percent of nonmarital births increased in all but four States for all races and for white births. For black births this percent rose in 35 States and the District of Columbia and declined in 15 States.

Age of father

The birth rate for men declined by 2 percent in 1992, to 55.8 live births per 1,000 men aged 15-54 years. This rate declined 4 percent between 1990 and

1992, after rising 7 percent between 1986 and 1990 (table 17).

Rates by age declined by up to 1 percent for men in age groups 15-19 through 35-39 years, and by 3 percent for men aged 45-49 years. The rate for men aged 40-44 years increased 1 percent, and the rates for men in age groups 50-54 and 55 years and over did not change. In the period 1986-90 rates by age of father had risen by 6-31 percent, with the largest increases reported for men in age groups 15-24 and 35-49 years.

The birth rate for white men declined 2 percent, to 52.2, and the rate for black men declined 3 percent, to 81.0. Rates by age for white men changed in the same pattern as rates for all races. All rates by age for black men, except for those aged 55 years and over, declined in 1992 by up to 3 percent. The declines in rates for both white and black men between 1990 and 1992 reversed the strong upward trends observed in rates between 1986 and 1990.

Educational attainment

Beginning with 1992 data, all 50 States and the District of Columbia reported information on the educational attainment of the mother. This important item is considered an indicator of socioeconomic status and has been correlated with various aspects of fertility behavior such as contraceptive use and receipt of prenatal care. Table 18 shows that more than three-fourths of mothers had 12 years or more of schooling (76 percent). The modal group was mothers whose completed education was high school (37 percent), followed by those with some college (21 percent) and college graduates (19 percent). Mothers giving birth in 1992 were slightly more educated than those who gave birth in 1991, with a higher percent having at least some college—40 percent in 1992 compared with 38 percent in 1991.

Women who gave birth in 1992 had educational attainment very similar to that of all women 15-49 years of age

(13), but there were differences within individual age groups. In age groups under 30 years, women who gave birth had less education than all women in general, both in terms of those having at least a high school diploma and those having at least some college. For example, for women aged 20–24 years who gave birth in 1992, 72 percent had at least a high school diploma, while 25 percent had at least some college compared with 86 and 52 percent, respectively, for all women in that age group. Childbearing by younger mothers would tend to limit their educational attainment. However, women who gave birth at 30 years of age and over had more education than all women of their respective ages. In 1992 approximately 60 percent of mothers in age categories of 30 years and over had completed at least some college compared with 51 percent of all women 30–49 years of age (tabular data not shown). This difference is partly because many women of these ages postponed childbearing to attain additional education (18).

Nearly 80 percent of white mothers had at least a high school diploma compared with 70 percent of black mothers. For white mothers the percent with at least a high school diploma increased with additional age, to a peak of 90 percent for those 30–34 years before declining slightly to 86 percent for mothers 40 years of age and over. The pattern by age for black women was similar to that for white women, with those 30–34 years of age having the highest proportion (85 percent) with at least a high school diploma. Overall, the median educational attainment was 12.8 years for white mothers compared with 12.5 years for black mothers.

Tables 10 and 11 show the percent of mothers who had completed 12 years or more of schooling for other racial groups and by detailed Hispanic origin. Mothers who had completed 12 years or more of schooling ranged from under two-thirds (64 percent) of American Indians to nearly all (98 percent) of Japanese women. The percent of mothers who had completed 12 years or more of schooling was much lower for those of Hispanic origin (46 percent) than for non-Hispanic women (82 percent). This finding reflects the fact that Hispanic women generally

have low educational attainment. However, there were large differences in educational attainment among detailed Hispanic subgroups, ranging from 39 percent with 12 years or more of schooling for Mexican women to 84 percent for Cuban women.

Maternal life-style and health characteristics

Maternal weight gain

A large number of studies indicate that maternal weight gain has a profound effect on fetal growth and that an inadequate gain is associated with an increased risk of low birthweight (less than 2,500 grams), intrauterine growth retardation, perinatal mortality, and shortened period of gestation (19,20). Information on maternal weight gain has been available from certificates of live birth since 1989. In 1992 the District of Columbia and all States except California included this item on their birth certificate (85 percent of all births in the United States). Data on weight gain by race and ethnicity of mother are presented in tables 19–24.

Liberalized guidelines on weight gain based on a woman's prepregnancy weight for height were issued in 1990 by the Institute of Medicine (IOM) of the National Academy of Sciences. The guidelines recommended that a mother of average size gain 25–35 pounds for optimum pregnancy outcome and that very young women and black women gain toward the upper limit of the range suggested for their weight and height (19). Between 1990 and 1992 the proportion of mothers gaining 26–35 pounds decreased (from 35.6 percent to 34.8 percent), with a concomitant rise in gains of more than 35 pounds (from 28.4 percent to 29.9 percent). However, coincident with this increase in higher gains, weight gains of less than 16 pounds—an amount associated with a greatly-elevated risk of low birthweight (less than 2,500 grams)—rose from 9.2 percent to 9.7 percent. Because of this compensating shift in the weight gain distribution, median weight gain was almost unchanged, increasing from 30.4 pounds to 30.5 pounds. The median weight gain of white mothers also changed very little during

this period, from 30.6 pounds to 30.7 pounds, but weight gain increased by 0.5 pounds for black mothers, from 28.1 pounds to 28.6 pounds (table 19).

White mothers are more likely than black mothers to gain 26–35 pounds (36.1 percent compared with 28.9 percent) and also more likely to gain 36 pounds or more (30.9 percent compared with 26.2 percent). Weight gains of less than 16 pounds are nearly twice as frequent for black than for white mothers (15.8 percent compared with 8.3 percent). Some of this racial disparity is explained by the generally shorter gestational age of black infants. However, for matched periods of gestation, there remain very substantial racial differentials in weight gain. On the average, white mothers gained 2.1 pounds more than black mothers in 1992—30.7 pounds compared with 28.6 pounds (table 19). According to a survey of women who gave birth in 1988, advice about weight gain differed substantially for white and black mothers. A significantly higher proportion of black than white mothers reported weight gain advice that did not conform to the standards for maternal weight gain at that time (21).

There are also substantial differences in weight gain among other racial groups (table 23). Only 7.0 percent of Chinese mothers gained less than 16 pounds in 1992 compared with 8.0 percent of Filipino, 8.9 percent of Hawaiian, 9.3 percent of Japanese, 11.5 percent of "Other" Asian or Pacific Islander, and 14.0 percent of American Indian mothers.

Large differences in weight gain are also apparent among mothers of Hispanic origin (tables 21 and 24). In 1992 information on weight gain for Hispanic-origin mothers was available from all States except California and New Hampshire, and from the District of Columbia. Cuban and Central and South American mothers are the least likely to gain less than 16 pounds (7.1 and 10.4 percent, respectively), and Mexican mothers, the most likely (13.0 percent); 11 percent of Puerto Rican and "Other" and unknown Hispanic-origin mothers had this low a weight gain.

Weight gain during pregnancy is also closely linked to maternal age, educational attainment, and marital status (data not shown in this report). Mothers in their

mid- to late twenties and early thirties are the least likely to gain less than 16 pounds (9 percent), while mothers aged 40–49 years are the most likely to have this minimal a weight gain (13 percent). Approximately 10 percent of teenagers and women in their mid- to late thirties and 11 percent of women in their early twenties gained less than 16 pounds. Weight gain increases with educational attainment, and gains of less than 16 pounds are nearly three times as common for women with less than a grade school education (14 percent) than for women with 16 years or more schooling (5 percent). Unmarried mothers are far more likely than married mothers to gain less than 16 pounds (13 percent compared with 8 percent).

Numerous studies have confirmed the positive relationship between weight gain and birthweight (19). As indicated in table 20, the percent low birthweight declines dramatically for both white and black births with added weight gain, regardless of period of gestation. Thus, for white births the incidence of low birthweight declined from 12.2 percent for gains of less than 16 pounds to 3.9 percent for gains of more than 45 pounds. The steep decline in low birthweight with added weight gain is slightly greater for black births, with low birthweight decreasing from 23.4 percent for gains of less than 16 pounds to 6.6 percent for gains of 46 pounds or more. However, for equivalent weight gain, the incidence of low birthweight is approximately twice as high for black births. Virtually similar declines in low birthweight with additional weight gain are apparent for births to Hispanic-origin mothers (table 22). The decline with added weight gain is particularly noticeable for Puerto Rican and Cuban births. The risk of low birthweight for Puerto Rican babies declined by 75 percent (from 17.8 percent to 4.5 percent) as weight gain increased from less than 16 pounds to 46 pounds or more; for Cuban mothers, low birthweight declined by 78 percent (from 15.3 percent to 3.4 percent) for comparable increases in weight gain.

A previous study (22) found that although cesarean rates generally rise with increased maternal weight gain,

rates are about the same or lower than average when weight gain is less than 36 pounds.

Medical risk factors

Mothers with certain medical risk factors during pregnancy are more likely to have a cesarean delivery and other obstetric and delivery procedures. Adverse outcomes such as low birthweight, preterm birth, and congenital malformations have been associated with several medical risk factors (23).

The most frequently reported risk factors continue to be anemia (18.3 per 1,000 live births), diabetes (25.9), and pregnancy-associated hypertension (28.5) (table 25). Between 1989 and the current year, the reported diabetes rate has increased steadily, from 21.1 to 25.9. Also increasing fairly steadily over this period were hydramnios/oligohydramnios (5.7 to 7.9) and acute or chronic lung disease (3.0 to 4.2). The reported incidence of eclampsia, however, declined between 1989 and 1992, from 4.4 to 3.6. Rates for the other medical risk factors remained quite stable.

Young mothers under 20 years of age were at especially increased risk of anemia (26.8), hemoglobinopathy (0.8), eclampsia (5.6), and renal disease (2.9). Rates for these factors tended to decrease with advancing age and then rise slightly for mothers 40 years and older.

For the first year since this item has been reported, the rate for acute or chronic lung disease, which includes diseases such as asthma, pneumonia, and tuberculosis, was higher for the youngest mothers—those under 20 years of age—than for the oldest mothers—those aged 40 years and older. Although increases were noted for each age group over past years, the rise was most pronounced among teenage mothers. Levels for the oldest mothers remained high, resulting in rates that were elevated at either end of the age range. Pregnancy-associated hypertension and hydramnios/oligohydramnios followed a similar U-shaped pattern of occurrence.

Factors more directly associated with older age of the mother are cardiac disease, diabetes, chronic hypertension, incompetent cervix, and uterine bleeding. Rates for genital herpes increased

steadily with age, but peaked at ages 35–39 years. Although rates for genital herpes were similar for black and white women (8.5 compared with 7.9 percent), reverse patterns by age were observed; rates increased with age for white mothers but decreased for black mothers.

Black mothers had disproportionately higher rates (67–105 percent) for anemia, chronic hypertension, and eclampsia compared with white mothers. Among older mothers, the racial disparity for chronic hypertension widened; black mothers 30 years and older were approximately three times as likely as white mothers of the same age to have this medical risk factor. Rates for pregnancy-associated hypertension were slightly lower among black mothers (27.7) compared with white mothers (29.2), but by 30–34 years of age, the risk for black mothers was 8 percent higher than that for white mothers. A similar pattern by age was observed for diabetes.

Eclampsia and incompetent cervix were associated with a substantially elevated risk of poor outcome. For 1992, infants born to mothers with eclampsia were three times as likely to be born preterm and more than six times as likely to be very low birthweight (less than 1,500 grams). Thirty-nine percent of births to mothers with an incompetent cervix were preterm births (less than 37 completed weeks of gestation) compared with 10.7 percent of all births; nearly one of every five were very low birthweight compared with one of every one hundred of all births.

The risk of a low (less than 2,500 grams) or very low birthweight or preterm birth was greater for black than for white mothers for each of the medical risk factors associated with these outcomes. Black mothers with chronic hypertension had a 53 percent greater likelihood of a preterm birth and were 64 percent more likely to have a low-birthweight baby compared with white mothers with this condition. The risk of very low birthweight—an even stronger indicator of poor outcome—for black mothers with eclampsia, renal disease, uterine bleeding, pregnancy associated hypertension, and incompetent cervix was between 61 and 131 percent higher for black than for white births.

The four most frequently reported medical risk factors are shown for other racial groups in table 26. Rates for all four factors (anemia, diabetes, pregnancy-associated hypertension, and uterine bleeding) were substantially higher for American Indian mothers than for any other racial or ethnic group. This pattern has been observed for several years (24). For example, the American Indian anemia rate of 57.0 per 1,000 was 82 percent higher than the rate for black mothers (31.3) and eight times as high as the rate of 6.8 for Japanese mothers. Among American Indian mothers, the incidence of pregnancy-associated hypertension was four times as high as for Chinese mothers (42.1 compared with 9.9).

Chinese mothers had the lowest reported levels of pregnancy-associated hypertension (9.9) and uterine bleeding (4.8) of all the racial groups and comparatively low levels of anemia (10.3). However, the Chinese diabetes rate of 41.4 was comparable to the high American Indian rate of 42.1. In fact, diabetes rates were elevated for each of the Asian or Pacific Islander groups in comparison with all racial groups except American Indian.

Hispanic mothers had rates of pregnancy-associated hypertension, diabetes, and uterine bleeding that compared favorably with those for white non-Hispanic mothers and may help to explain the similar levels of low birthweight (table 27). Among Hispanic subgroups, rates for diabetes and uterine bleeding were highest for Puerto Rican mothers, whereas, the rate for pregnancy-associated hypertension was the highest for Cuban and for "Other" and unknown Hispanic mothers. "Other" and unknown Hispanic mothers also had the highest level for anemia.

Tobacco use

In 1992, 16.9 percent of mothers were reported to have smoked during pregnancy, a 5-percent decline from the 1991 level (17.8 percent), and a 13-percent reduction from 1989 (19.5 percent) when this information first became available on the birth certificate. (Data for 1992 are shown in tables 23, 24, and 28–31.) These trends are

comparable to those recently reported for women of reproductive age based on data from the National Health Interview Survey (25).

Cigarette smoking during pregnancy has been repeatedly associated with reduced infant birthweight, preterm delivery, and intrauterine growth retardation (26,27). All of these indicators of poor pregnancy outcome, in turn, are major predictors of infant mortality and infant and childhood morbidity. Sudden infant death syndrome (SIDS), which has been associated with low birthweight, has been directly linked in many studies to maternal smoking even after other factors have been considered (28). A very recently reported study also has associated infant and childhood asthma directly with maternal smoking during pregnancy (29). In that study it was also demonstrated that smoking, even in the earliest stages of pregnancy, will compromise the infant's health; there may be negative health consequences for the baby even if the mother discontinues smoking early in pregnancy.

Tobacco adversely affects pregnancy outcome in several ways. One of the most important of these is the passage of carbon monoxide from tobacco smoke into the fetal blood supply, thus depriving the growing infant of oxygen (27).

In 1992, 46 States and the District of Columbia—representing 76 percent of all U.S. births—reported maternal smoking on the birth certificate. California, Indiana, New York, and South Dakota did not provide this information at all, or did not provide it in a comparable format.

Smoking during pregnancy was reported at a higher rate for white than for black mothers in 1992, 17.9 percent compared with 13.8 percent. This differential has been observed since 1989. Smoking rates for both white and black women declined between 1989 and 1992, by 12 and 19 percent, respectively. Smoking rates for Asian women are generally very low—2–7 percent for Chinese, Japanese, Filipino, and "Other" Asian or Pacific Islander women. Hawaiian women however have a relatively high smoking rate, 18.5 percent, as do American Indian women, 22.5 percent (table 23). Data on tobacco use by Asian women (except Hawaiians) are somewhat compromised by the fact that California

and New York do not report this information, and together they account for 44–63 percent of births in each Asian subgroup except Hawaiian. However, other studies have also shown low maternal smoking rates for Asian women (30,31).

Hispanic mothers also reported generally low rates of tobacco use, just 5.8 percent overall in 1992 (tables 24 and 29). Smoking rates ranged from 3 to 6 percent for Mexican, Cuban, and Central and South American mothers to 10–13 percent for Puerto Rican and "Other" and unknown Hispanic mothers. The incidence of smoking declined in all Hispanic subgroups. Data on smoking for Hispanic mothers are affected by the same limitation noted above for Asian women—the lack of information for California and New York births, which together account for about half of all Hispanic births. However, other studies corroborate the generally low smoking rates for Hispanic mothers (31,32).

Not only have Asian and Hispanic mothers had low smoking rates, but those who are foreign-born are even less likely to smoke than their U.S.-born counterparts. Three percent of foreign-born Asian mothers were reported as smokers compared with 13 percent of U.S.-born Asian mothers. Similarly, 3 percent of foreign- or Puerto Rican-born Hispanic mothers smoked compared with 9 percent of their U.S.-born counterparts (tabular data not shown).

Smoking rates vary considerably by maternal age. Among white mothers, the proportion smoking was highest for women aged 18–19 years (26 percent), followed by teenagers 15–17 years and women aged 20–24 years (23 percent). Smoking was least frequent among mothers aged 40 years and older (11 percent) (table 28). The pattern was quite different for black mothers, with smoking rates lowest for teenage mothers (4–7 percent), increasing steadily to 21 percent for mothers in their thirties and then declining to 16 percent for mothers aged 40 and older. These variations by age and race have been observed for several years.

Smoking rates vary little by age among Hispanic women, with low overall smoking rates (table 29). Thus, for example, the proportion smoking varied

from 2 to 5 percent for Mexican and Central and South American mothers and 5–7 percent for Cuban mothers. Rates varied more for Puerto Rican women, 9–14 percent.

The steady decline since 1989 in maternal smoking for mothers of all ages has been observed within most age groups as well. Smoking rates declined for white and black women in all age groups through 30–34 years and for women 40–44 years. The rate for white women aged 35–39 years had declined through 1991 and was unchanged in 1992; for black women 35–39 years the rate increased continuously, by 8 percent from 1989 to 1992.

The decline from 1989 to 1992 in the proportion of mothers who smoke has been accompanied by a growing tendency among women who smoke to smoke fewer cigarettes (table 28). During this period there have been small but steady increases in the proportion of women who smoke half a pack of cigarettes (10 cigarettes) or less, from 58 to 62 percent. The proportion smoking 1–5 cigarettes has also increased from 19 to 21 percent.

As has been the case in previous years, white mothers in 1992 not only had higher smoking rates than black mothers, but those who smoked were heavier smokers. For example, among white smokers, 34 percent smoked 16 cigarettes or more per day compared with 19 percent of black mothers. Conversely, just 19 percent of white mothers smoked one to five cigarettes daily compared with 35 percent of black mothers.

Smoking rates vary in a distinctive pattern according to the mother's educational attainment (table 30). Women with 9–11 years of schooling had the highest smoking rate, at 31 percent overall; 38 percent of women aged 20 years and older in this education group were reported as smokers. The rate was lowest for college graduates, just 4 percent. The relationships between smoking status and educational attainment were similar for white and black mothers; however, white mothers had higher smoking rates than black mothers in each educational attainment subgroup, except those who are college graduates. The disparity by race was greatest among women with 9–11 years of schooling, with 36 percent of

white mothers reported as smokers compared with 19 percent of black mothers.

Groups with the highest smoking rates also tend to be the heaviest smokers. For example, 40 percent of mothers with 9–11 years of education smoked at least half a pack of cigarettes daily compared with 26 percent of college graduates who smoked. This pattern was observed for white and black mothers, but the proportions of heavy smokers were substantially greater for white mothers.

Maternal smoking has been shown repeatedly to severely compromise infant birthweight (26,27). In 1992 babies born to smokers were at nearly twice the risk of low birthweight (less than 2,500 grams) as babies born to nonsmokers, 11.5 percent compared with 6.3 percent (table 31). These variations in low birthweight rates by smoking status were observed in 1989–91 as well (1–3). The effect of smoking on infant birthweight becomes more severe with advancing maternal age. Infants born to teenagers who smoked were at 12–26 percent greater risk of low birthweight. For births to mothers aged 20–24 years the disparity was 53 percent, while for mothers aged 25 years and older the risk of low birthweight was more than double for births to smokers.

The impact of smoking on birthweight was observed for white and black infants alike. The low-birthweight rates for white babies were 9.7 percent for births to smokers and 5.0 percent for births to nonsmokers. The proportions were much higher for black babies, but the disparity by smoking status was clear—22.1 percent of births to smokers and 11.9 percent of births to nonsmokers were low birthweight.

The percent low birthweight for births to women who smoke the fewest cigarettes, less than six per day, was still 41 percent higher than for births to nonsmokers, 8.9 percent compared with 6.3 percent. As the number of cigarettes smoked increases, the percent low birthweight is elevated (26,33). For example, in 1992 among white infants, the percent rose from 6.9 percent for births to the lightest smokers to 11.4 percent for births to mothers smoking at least one and one-half packs of cigarettes daily. Similarly, among black infants, the increase in

low birthweight was from 15.2 percent for women smoking less than six cigarettes a day to 24.8 percent for the heaviest smokers. It is apparent that there is no level of cigarette smoking that is not harmful to the infant.

One way to evaluate the overall impact of smoking on low birthweight is to estimate the risk of low birthweight that is attributable to maternal smoking (the percent attributable risk) (34,35). Approximately 13 percent of the low-birthweight incidence in the United States in 1992 can be attributed to smoking during pregnancy. In other words, if no pregnant women had smoked during pregnancy, the proportion of low birthweight would have been about 6.1 percent rather than the actual level of 7.1 percent, and about 40,000 fewer babies would have been born with low birthweight in 1992.

Alcohol use during pregnancy

The use of alcohol during pregnancy is also a risk factor for poor pregnancy outcome. Studies have shown that heavy alcohol use causes a variety of adverse effects, the most severe of which is fetal alcohol syndrome (FAS). FAS is characterized by growth retardation, facial malformations, and dysfunctions of the central nervous system, including mental retardation and behavioral disorders (36). Additionally, maternal alcohol use has been shown to compromise infant birthweight, independent of factors such as maternal smoking and other maternal and infant characteristics (33,37).

In 1992 data on alcohol use were reported by 47 States and the District of Columbia, accounting for 78 percent of U.S. births. This information was not reported on the birth certificates for California, New York, and South Dakota.

Reported alcohol use declined for women in nearly all racial and Hispanic-origin groups in 1992, as it has since 1989 when the data first became available. In 1992, 2.6 percent of births were to mothers who reported drinking during pregnancy compared with 2.9 percent in 1991 and 4.1 percent in 1989. Black mothers were more likely than white mothers to report alcohol use (3.3 percent compared with 2.4 percent). The highest

reported use was among American Indian mothers (6.6 percent) and the lowest among Filipino, "Other" Asian, Cuban, and Central and South American mothers (0.7–0.9 percent) (tables 23–24, and 32). As was the case for data on maternal smoking, the data on maternal alcohol use for Asian and Hispanic women exclude information for California and New York residents who account for 44–63 percent of births in racial (except Hawaiian) and Hispanic subgroups. However, other studies indicate that alcohol use among Hispanics is about half that of black women (38).

Alcohol use during pregnancy is clearly substantially underreported on the birth certificate. Other studies have shown alcohol use during pregnancy of 20 percent or more, based on data from personal interviews and written questionnaires (39,40). It is believed that the underreporting on the birth certificate is a consequence of the way the question is framed, focusing on the number of drinks per week. Women who have had an occasional drink during pregnancy, perhaps once a month or less, may not consider this to be alcohol use for purposes of the question. Another factor that is probably causing underreporting is the stigma that is associated with alcohol use, especially during pregnancy (41).

The patterns of alcohol use by maternal age have changed little since this information first became available in 1989. The proportion reported as drinkers rose from 0.8 percent for mothers under 15 years of age, to 3.9 percent for mothers aged 35–39 years, and then declined slightly to 3.5 percent. These patterns were observed for both white and black women (table 32).

Among women who used alcohol in 1992, 61 percent reported one drink or less per week, 17 percent reported two drinks, 11 percent reported 3–4 drinks, and 12 percent reported five drinks or more. These figures were comparable to those observed in 1991 (3).

Alcohol use does not vary in a consistent way according to mother's educational attainment. The highest reported rate was among mothers with 9–11 years of schooling, 3.3 percent, followed by mothers who were college graduates, 2.8 percent (tabular data not shown).

Although maternal drinking is sharply underreported, the use that is reported is associated with an elevated rate of low birthweight (less than 2,500 grams). The proportion low birthweight for babies born to drinkers was 12.9 percent compared with 7.0 percent for babies born to nondrinkers. Heavy drinking is linked to even greater rates of low birthweight. The percent low birthweight rose from 9.0 percent of births to women having one drink or less per week to 24.5 percent of births to women who had five drinks or more per week (tabular data not shown). In addition, studies have shown that when alcohol and tobacco are both used, the impact on infant birthweight is further worsened (33).

Medical services utilization

Prenatal care

The first notable advance in prenatal care utilization in more than a decade occurred in 1992. The proportion of mothers beginning prenatal care in the critical first trimester of pregnancy rose to 78 percent, the highest level ever reported. Since 1979, the percent of mothers receiving early care had remained essentially stable at around 76 percent. Further, the proportion of mothers delaying care until the third trimester, or who received no care at all, declined to 5 percent; it had been at 6 percent from 1983 to 1991. (See tables 34–36 for 1992 data.)

As in previous years, older mothers initiated care earlier than younger mothers. For 1992, 86 percent of mothers aged 30–39 years began care in the first trimester compared with only 59 percent of mothers under 20 years of age. Teenage mothers (15–19 years) also were at higher risk of delayed or no care (10 percent) than mothers in their thirties (3 percent).

Although distinct racial differences in the receipt of prenatal care persist, increases in early care were noted for both white and black mothers and reached the highest levels ever reported for both racial groups. The proportion of white mothers beginning care in the first trimester increased to 81 percent for 1992 compared with 79 percent for 1991. After

deteriorating to 60 percent in 1989, the percent of black mothers receiving early care has been on the increase, rising to 64 percent for 1992. Improvements were noted for both races for each age group and for married and unmarried women.

Timely, adequate prenatal care is known to have a beneficial effect on birth outcome. As has been observed for earlier years, in 1992 mothers who initiated care early were less likely to have a low-birthweight infant (6.4 percent) than were mothers with late or no care (11.9 percent). Although it is likely that the comparative lack of adequate care of black mothers contributes to their much higher levels of low birthweight, racial differences in pregnancy outcome remain after controlling for the amount and timing of prenatal care, suggesting that these factors are limited predictors of outcome (42). Several studies have suggested that the content of care; that is, advice on weight gain and behavior modification and technological procedures performed may vary by race and contribute to the poorer birth outcomes of black infants (21,43,44).

The Kessner Index was developed to take into account both the timeliness and quantity of prenatal care, as well as the gestational age of the baby. Care is defined as "adequate," "intermediate," or "inadequate." For 1992, 70 percent of all mothers received adequate care and 7 percent received inadequate care. Although slight improvements over 1991 were found in the adequacy of prenatal care for both white and black mothers, racial differences remain substantial; 74 percent of white mothers—compared with 54 percent of black mothers—received adequate care in 1992. The proportion of black mothers receiving inadequate care (15 percent) was more than twice as high as that for white mothers (6 percent).

In spite of increases in the timeliness of care, there was no concurrent increase in the median number of prenatal visits from 1991, or any amelioration of the racial gap, as median was unchanged for white (12.2) and black mothers (10.7). However, this racial differential in the median number of prenatal visits dissipates considerably when examined by marital status and gestation. The median

visits for married black mothers with a birth of at least 37 completed weeks of gestation was 12.2 compared with 12.5 visits for white mothers.

The early receipt of prenatal care varied substantially among other racial and ethnic groups, ranging from 62 percent for American Indian mothers to 88 percent for Japanese mothers (tables 23 and 24). Overall, 64 percent of Hispanic mothers initiated care in the first trimester, but for specific Hispanic groups the range was from 62 percent for Mexican mothers to 87 percent for Cuban mothers.

Ten percent of all Hispanic mothers delayed care until the final trimester or received late or no prenatal care—levels similar to those for black and American Indian mothers. In contrast, 2–3 percent of Chinese, Japanese, Cuban, and white non-Hispanic mothers received late or no prenatal care.

The New England States, Iowa, Maryland, and Utah reported the highest proportions of mothers beginning care in the first trimester (85 to 89 percent) (table 35). Except for Maryland these States also had the lowest levels of mothers who had received late or no care (2–3 percent). The most elevated levels of late or no care for white mothers were reported in States with large Mexican populations—New Mexico and Texas (9 percent), Arizona (8 percent), and Nevada (7 percent). For States with at least 1,000 black births, Minnesota, Nevada, New York, the District of Columbia, and Pennsylvania reported the highest proportions of mothers with delayed or no care (14 to 17 percent). Increases in the early receipt of care and decreases in late or no care between 1991 and 1992 were observed for the vast majority of States.

Obstetric procedures

The most prevalent obstetric procedure in 1992, reported for over 3 million births, or 77 percent of all live births, was electronic fetal monitoring (EFM) (table 36). EFM usage in 1992 rose for the third consecutive year. All age groups experienced increases in EFM compared with 1991, again the third year for this to occur. Data from two surveys conducted by the National Center for Health

Statistics demonstrate that EFM usage rose substantially during the 1980's, from 45 percent in 1980 to 62 percent in 1988 (45).

In 1992 the difference in EFM usage between births that were low birthweight (less than 2,500 grams) and those that were 2,500 grams or more was only 1 percent (76 and 77 percent, respectively). Sixty-eight percent of mothers who had repeat cesarean sections had EFM compared with 78 percent for primary cesarean sections and 86 percent for vaginal births after cesarean section (VBAC) (tabular data not shown). Hawaiian and white mothers had the highest (78 percent) and Filipino mothers had the lowest (68 percent) rates in EFM usage in 1992 (table 26). Among Hispanic-origin subgroups, the lowest rate was for Mexican mothers, 65 percent (table 27).

In 1992 just over 900,000 live births did not receive EFM, and according to the American College of Obstetricians and Gynecologists, "Currently available data support the conclusion that, within specified intervals, intermittent auscultation (listening to sounds within the body with or without a stethoscope) is equivalent to continuous electronic fetal monitoring in detecting fetal compromise" (46). Thus, these births did not necessarily run an additional risk of undetected fetal compromise. Intermittent auscultation in normal labor is now supported by several studies to be adequate (47).

Ultrasound screening during pregnancy can detect fetal growth retardation, placental abnormalities, multiple gestation pregnancies, and congenital anomalies (48,49). It can also expose pregnant women to the slight risk of false positive diagnosis of malformations. Recent studies have suggested that ultrasound usage might not improve perinatal outcome, maternal management, or maternal outcome (50).

According to data from birth certificates, 58 percent of mothers who had live births in 1992 received ultrasound, a 21-percent increase over 1989 (48 percent). Results from the 1988 National Maternal and Infant Health Survey show ultrasound usage at 63 percent (51), which suggests that there may be under-reporting of ultrasound on the birth certificate. Chinese mothers had the lowest

rates in ultrasound usage (48 percent) and white mothers had the highest (59 percent) (table 26). Data by Hispanic origin (table 27) show the rate for Mexican mothers to be lowest (at 40 percent) of all Hispanic groups.

Ultrasound is routinely used for needle guidance during amniocentesis and, in 1992, 85 percent of mothers who had amniocentesis also had ultrasound, while 57 percent of mothers who did not have amniocentesis had ultrasound (tabular data not shown). Sixty-three percent of all births by cesarean delivery and VBAC births received ultrasound, higher than the 55 percent for other vaginal births (tabular data not shown).

The overall rates of stimulation and induction of labor in 1992 were 129 and 114 per 1,000 live births, respectively. Mothers aged 25–29 years had the highest rate of stimulation of labor (132 per 1,000) and mothers aged 40–49 years had the lowest (121 per 1,000) (table 36). Induction of labor rates had a slightly larger range by age, from 98 for the youngest mothers to 127 for the oldest mothers. For both stimulation and induction of labor, white mothers had the highest rates while Filipino mothers had the lowest (table 26). Both of these procedures were more likely to be employed for births where infant birthweight was high. The range in rates between infants weighing less than 2,500 grams (low birthweight) and those over 4,000 grams for stimulation was from 85 to 138 per 1,000 live births and for induction, from 93 to 160 (tabular data not shown).

Amniocentesis, an invasive prenatal diagnostic procedure performed to detect genetic disorders, was reported for 32 of every 1,000 live births in 1992 (tables 26, 27, and 36). The rate of amniocentesis for the oldest age group (40–49 years) was 17 times the rate for the youngest age group (under 20 years)—192 compared with 11. Similar differences by age were observed for white mothers. For black mothers the difference between the oldest and youngest age groups was elevenfold (106 compared with 9). Japanese mothers had the highest rate (87 per 1,000 live births) while black mothers had the lowest rate (18 per 1,000). White non-Hispanic mothers had a rate nearly three times higher than Mexican mothers (38 compared with 14).

Tocolysis, which is used to avoid preterm birth, was the least prevalent (19 per 1,000 live births) of procedures identified on the birth certificate. However, over one-third of mothers who had tocolysis still delivered preterm. White mothers were more likely than black mothers to have received tocolysis (19 and 16, respectively). Among black and white mothers, rates by age were highest for mothers under 20 years of age (17 and 23, respectively).

Rates for the six selected procedures vary by the education of mother, birthweight and gestational age of the infant, and month prenatal care began (tabular data not shown). All of these procedures had higher rates for mothers with 12 years or more of education compared with mothers who had less schooling. The rates for amniocentesis showed the greatest difference between mothers with 12 years or more of education and mothers with less education (37 compared with 14). Mothers giving birth to low-birthweight (less than 2,500 grams) or preterm (less than 37 completed weeks of gestation) infants were much more likely than those giving birth to normal birthweight or full-term births to have had amniocentesis (2.1 and 1.7 times greater) or tocolysis (5.0 and 4.4 times greater). The rates for all six of these procedures were higher for mothers who began prenatal care in the first trimester of pregnancy as compared with mothers who began prenatal care later. For amniocentesis the rate was more than twice as high (36 compared with 17).

Complications of labor and/or delivery

Of the 15 reported complications of labor and/or delivery, 6 were reported at a rate greater than or equal to 30 per 1,000 live births in 1992: Meconium, moderate/heavy (61 per 1,000); fetal distress (42 per 1,000); breech/malpresentation (38 per 1,000); and cephalopelvic disproportion, premature rupture of membrane (PROM), and dysfunctional labor (30–33 per 1,000 (table 37).

For these six complications there were observable variations by race and Hispanic origin (tables 26 and 27). Black mothers had the highest rates of all races for meconium and fetal distress; Japanese

mothers, for breech/ malpresentation; Filipino mothers, for cephalopelvic disproportion; and American Indian mothers had the highest rates of all races for PROM and dysfunctional labor. Japanese mothers had the lowest rates of all races for meconium; Hawaiian mothers, for fetal distress and dysfunctional labor; black mothers, for breech/malpresentation; American Indian mothers, for cephalopelvic disproportion; and Filipino mothers had the lowest rates of all races for PROM. By Hispanic origin, Cuban mothers had the highest rate for dysfunctional labor. Mexican mothers had the lowest rates for PROM, dysfunctional labor, and breech/malpresentation.

Distinctions by age of mother were observed in the rates of three of the six most prevalent complications (table 37). The highest rates of meconium and fetal distress were for the youngest (under 20 years of age) and oldest (40–49 years of age) mothers; the lowest rates were for mothers in the middle years of childbearing (25–34 years of age). The oldest mothers had the highest rates of breech/malpresentation, while the youngest mothers had the lowest rates.

Although not frequent, placenta previa is a serious complication and occurred in over 55,000 births between 1989 and 1992 (4 per 1,000 live births). Increasing age of mother and live-birth order have been shown to increase the risk of this complication (52). Data from birth certificates during this 4-year period also identify these two risk factors, particularly increasing age of mother (tabular data not shown).

Of the six most prevalent complications, four—breech/malpresentation, dysfunctional labor, PROM, and cephalopelvic disproportion—occurred more often to mothers with 13 years or more of education than for mothers with lower educational attainment; two—meconium and fetal distress— occurred more often to mothers with less than 13 years of education (data not shown here). The same pattern is observed for white mothers. For black mothers meconium was the only complication of the six most prevalent with a higher rate for mothers with less than 13 years of education.

Rates for four complications—meconium, prolonged labor, dysfunctional labor, and cephalopelvic disproportion—were

lower for low-birthweight infants (less than 2,500 grams) than for infants weighing 2,500 grams or more. Of these four, rates were higher for dysfunctional labor and, particularly, cephalopelvic disproportion for mothers who gained more weight during pregnancy, regardless of the weight of the infant (data not shown here). Of the remaining 11 complications that had higher rates for low-birthweight infants, four—PROM, abruptio placenta, placenta previa, and seizures during labor—had rates at least four times those of infants weighing 2,500 grams or more. These same four complications, with considerable differences by birthweight, also had large differences (three to eight times as high) in rates for those born preterm (less than 37 completed weeks of gestation) when compared with term births.

Attendant at birth and place of delivery

The 1989 revision of the U.S. Standard Certificate of Live Birth requested more detailed information on place of delivery and attendant at birth than formerly. Four years of information are now available for deliveries by certified nurse-midwives as distinguished from “Other” or lay midwives; for doctors of osteopathy (D.O.’s) separately from other medical doctors (M.D.’s); and for free-standing birthing centers, clinics or doctor’s offices, and residences.

In 1992, as in all previous years, almost all births (94.2 percent) were attended by physicians (M.D.’s and D.O.’s) in a hospital setting (table 38), down slightly from 94.5 percent in 1991. There has been a steady decline in such births since 1975, the first year for which comparable data are available, when 98.4 percent of all births were physician-attended hospital births. Concomitantly, the proportion of all births attended by midwives in hospitals increased from 0.6 percent in 1975 to 3.9 percent in 1991 and to 4.4 percent in 1992. The overall proportion of births delivered in hospitals changed very little during this period—declining from 99.1 percent in 1975 to 98.9 percent in 1992, while out-of-hospital births increased from 0.9 percent to 1.1 percent of all births. The proportion of all births that were attended by physicians, midwives, and others in an out-of-hospital setting was relatively

stable from 1975 to 1992; declining from 0.4 percent to 0.3 percent of all births for physicians, and increasing from 0.3 percent to 0.5 percent for midwives and from 0.1 to 0.3 percent for other attendants.

Freestanding birthing centers are nonhospital facilities that provide maternity care for women judged to be at low risk of pregnancy-associated complications. Although only a small proportion of births are delivered in such sites (0.3 percent in 1992), there is considerable interest in this setting as an alternative to hospital delivery. A recent article concluded that birthing centers offer a safe and cost-effective alternative to hospital delivery for low-risk women (53). In 1992, 30.4 percent of the births in freestanding birthing centers were attended by physicians and 67.2 percent were attended by midwives.

Births in private residences (home births) comprised 0.6 percent of all births, essentially the same as in 1989–91 (0.7 percent). In 1992, 18.1 percent of home births were delivered by physicians; 43.4 percent, by midwives; and 38.5 percent, by other attendants.

In 1992, D.O.'s delivered 3.4 percent of all births, almost all in hospitals (99 percent). This was approximately the same proportion of births delivered by D.O.'s in 1991 (3.3 percent), but a somewhat higher percent than in 1989 (2.8 percent), the first year for which such information is available.

Certified nurse-midwives (CNM's) are registered nurses who have completed graduate-level programs in midwifery and have been certified by the American College of Nurse-Midwives (54). They provide prenatal care and manage the labor and delivery of women who have been determined to be at low risk of obstetrical complications. Because not all States license CNM's, some births delivered by CNM's have been classified in the "other midwife" category. It can be assumed that almost all births attended by other midwives in hospitals and birthing centers were delivered by CNM's. In 1992 midwives delivered 4.4 percent of hospital births and 67.2 percent of births in freestanding birthing centers. Both of these proportions have increased each year since 1989, when 3.1 percent of hospital births and 63.1 percent of freestanding

birthing-center births were delivered by midwives. CNM's were identified as the attendant for 11.5 percent of home deliveries compared with 12.6 percent in 1989.

There are distinct differences in the population of women who deliver in hospitals, birthing centers, or private residences; and within each of these settings, there are also large dissimilarities by attendant. For example, mothers giving birth in hospitals, who closely mirror the characteristics of all women giving birth, tend to be younger than mothers giving birth in birthing centers or at home. Of hospital births, 13 percent were to teenagers and 32 percent were to mothers 30 years or older. By contrast, only 9 percent of the mothers delivering in birthing centers and 7 percent delivering at home were in their teens; 36 percent of the mothers delivering in birthing centers and 46 percent delivering at home were at least 30 years of age. Mothers who deliver in hospitals attended by midwives tend to be younger than mothers attended by physicians.

Although approximately the same proportion of mothers who delivered in a hospital, in a birthing center, or at home had at least 13 years of education (40–42 percent), mothers delivering in a birthing center or at home were more than twice as likely to have less than 8 years of schooling than mothers delivering in a hospital (16 percent compared with 6 percent). There is also considerable variation according to attendant in years of schooling completed. Mothers attended by physicians in hospitals are more likely to have completed 13 years or more of schooling than those attended by midwives in hospitals, but for out-of-hospital deliveries, mothers attended by midwives generally have higher levels of educational attainment than those delivered by physicians.

Other notable differences in the characteristics of women by attendant and place of delivery include the percent who are foreign born (higher for midwife- than for physician-attended births both in and out of hospitals); the proportion of mothers who are unmarried (higher for midwife- than for physician-attended births in hospitals, but higher for physicians than for midwives out of hospital); and the proportion of mothers who are black (higher for midwives than for

physicians in hospitals, but far higher for physicians in a nonhospital setting).

Method of delivery

The overall rate of cesarean delivery (number of births delivered by cesarean per 100 total births) in 1992 was 22.3 percent (table 39). This is 0.5 percentage points, or 2.2 percent lower than the 1989 rate of 22.8 (table 40), the first year for which data on method of delivery are available from birth certificates.

Of the 888,622 cesarean births in 1992, 62 percent were primary or first cesareans, and 38 percent were repeat cesareans (table 39). These proportions are almost unchanged since 1989 (1–3 percent). Primary cesarean rates (first cesareans per 100 live births to women who had no previous cesarean) declined by 3 percent between 1989 and 1992, from 16.1 to 15.6 (table 40).

Among the national objectives for health promotion and disease prevention for the year 2000 are reductions in the overall cesarean rate to 15 or less, and in the primary cesarean rate to 12 or less (55). In 1992, as in 1991, no State had a cesarean rate as low as 15, and only 19 States had a cesarean rate of 20 or less (compared with 18 states in 1991). On the other hand, seven States had a primary cesarean rate of 12 or less compared with six States in 1991. (State data are not shown in this report.)

Both overall and primary cesarean rates increase rapidly with maternal age (table 39). In 1991 the overall cesarean rate for women in the oldest years of childbearing (40–49 years) was 31.7, almost double the rate of 16.1 for teenagers; the primary cesarean rate for the oldest mothers was 22.4 percent, 57 percent higher than the rate of 14.3 percent for the youngest mothers. Advanced maternal age appears to be an independent risk factor for cesarean delivery. Older mothers are more likely to deliver by cesarean regardless of race, Hispanic origin, parity, marital status, or educational attainment (22).

When age and birth order are considered together, rates were highest for women aged 40–49 years having their first (45.2 percent) or second child (36.0 percent) and for women 35–39

years having their first child (38.6 percent), while the lowest rates were for teenagers having a second- or higher-order birth (14.9 percent). For women 20 years or older, cesarean rates were highest for first-order births and declined for successive births (figure 4).

Vaginal birth after a previous cesarean delivery (VBAC) has become increasingly common in the United States, although still far below the frequency in many European countries (56). In 1992, 22.6 percent of women who had a previous cesarean delivered vaginally and 77.4 percent had a repeat cesarean. The VBAC rate (number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean) has risen at least 1 percentage point each year since 1989 when it was 18.9 percent (table 40). The year 2000 objective pertaining to VBAC is for a rate of 35 (55). In 1992 only four States had reached this objective, one less than in

1991. VBAC rates are highest for teenagers (26.3) and decline steadily with advancing age, to 17.1 for women aged 40–49 years.

There is little or no difference in cesarean and VBAC rates for white and black mothers. In 1992 the total cesarean rate was 22.5 for white mothers and 22.1 for black mothers; the primary rate was 15.7 for both racial groups, and the VBAC rate was 22.5 for white mothers compared with 22.4 for black mothers. However, there continue to be very substantial differences in rates among other racial groups, even when differences in the age distribution of mothers are considered (22). In 1992 the highest cesarean rate was for Filipino mothers (24.3), and the lowest was for American Indian (17.9), Hawaiian, and “Other” Asian or Pacific Islander mothers (18.0) (table 23). Mothers of Hispanic origin as a group were less likely to have a cesarean delivery (21.2 percent) than non-Hispanic

white (22.8 percent) or non-Hispanic black mothers (22.2 percent). Cuban mothers had the highest rate of any Hispanic origin group (33.9), with rates for other Hispanic groups ranging from 20.5 for Mexican mothers to 22.5 for “Other” and unknown Hispanic mothers (table 24).

Cesarean and VBAC rates for the maternal medical risk factors, complications of labor and/or delivery, and obstetric procedures included on birth certificates are shown in table 41. Compared with the overall cesarean rate of 22.3, rates were at least 50 percent above this average for 6 of the 14 medical risk factors of pregnancy, ranging from 35.8 for diabetes to 51.0 for eclampsia. Even higher cesarean rates are evident for many complications of labor and delivery, with rates at least 50 percent more than average for 11 of the 15 complications tracked on birth certificates. Rates are particularly high for placenta previa (81.7), breech/malpresentation

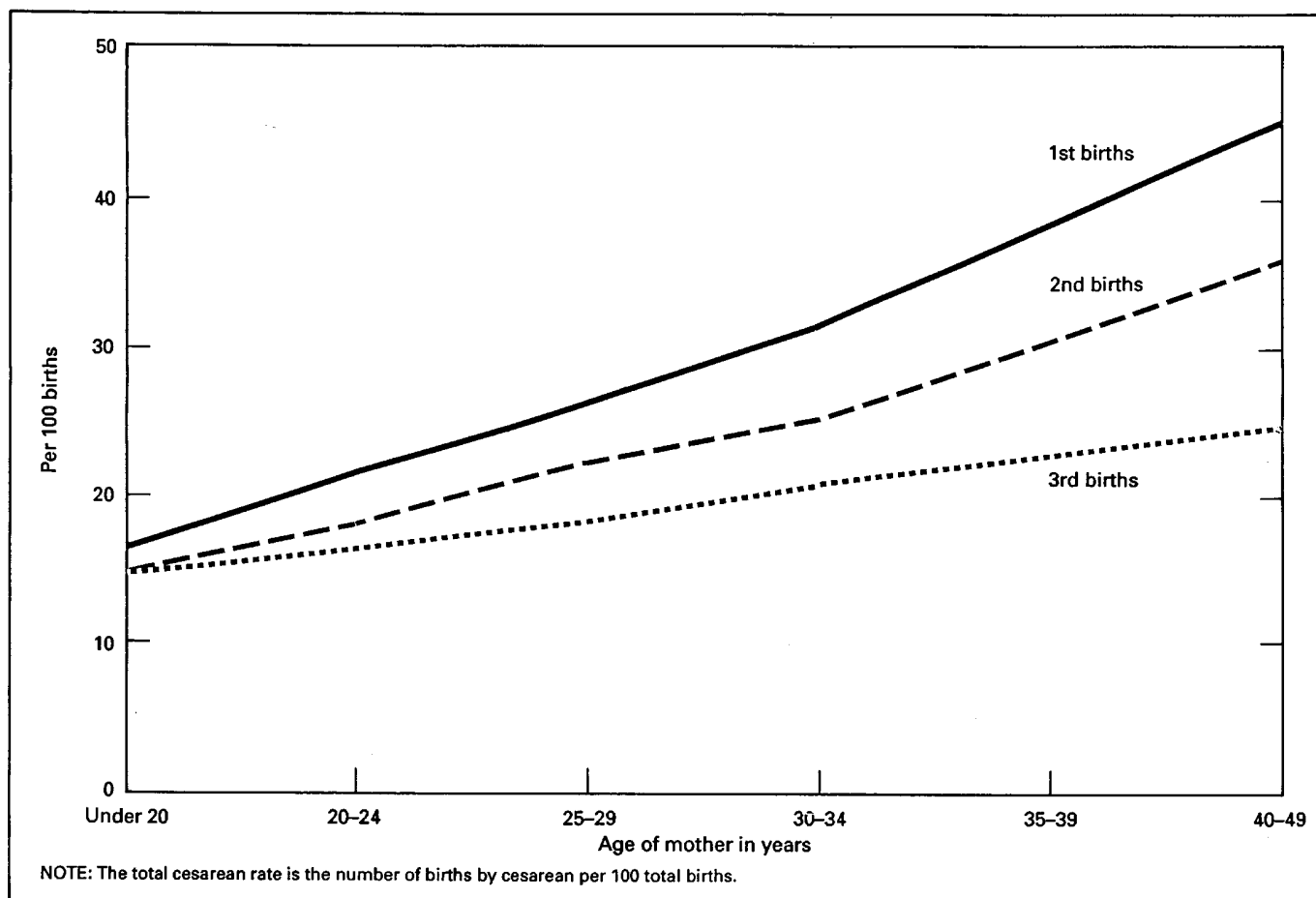


Figure 4. Total cesarean rates by age of mother and live-birth order: United States, 1992

(85.0), and cephalopelvic disproportion (97.8). Amniocentesis was the only obstetric procedure with a greatly elevated cesarean rate (35.6). The 1992 cesarean rates for almost all of these conditions and procedures are fairly close to those in 1989–91, and, as in previous years, generally quite similar for white and black mothers (1–3,22).

Since 1989 information on forceps deliveries has been available from live birth certificates. In 1992, 4.3 percent of births were delivered by forceps, 7 percent lower than the 1991 rate of 4.6 percent and 22 percent lower than the 1989 rate of 5.5 percent. Thus the decline in use of forceps during the 1980's (57), which was concomitant with the rise in cesarean delivery, continues unabated despite the slight decline in cesarean delivery since 1989.

Vacuum-extraction delivery increased steadily in the 1980's (57,58), and information available from live birth certificates since 1989 indicates that this trend has continued. In 1989, 3.5 percent of births were by vacuum extraction, rising to 4.8 percent in 1992, an increase of 37 percent.

In 1992, as in previous years, both forceps and vacuum-extraction delivery were far more common for white than for black births. Forceps were used in 4.6 percent of white compared with 3.0 percent of black births, and vacuum extraction was used in 5.2 percent of white compared with 3.0 percent of black births. Both modes of delivery increased sharply with added birthweight up to 4,000 grams, and then declined slightly for babies weighing 4,000 grams or more, reflecting the increased use of cesarean delivery for babies of high birthweight (tabular data not shown).

Infant health characteristics

Gestation

The proportion of infants born preterm (less than 37 completed weeks of gestation) declined very slightly between 1991 and 1992, from 10.8 to 10.7 percent. Except for a decline in 1984, this proportion had risen steadily since 1981 (9.4 percent) (tables 42 and 43). Although the etiology of preterm delivery is largely unknown, it is a leading cause of new-

born and infant mortality (59). The proportion of births born at term (37–41 weeks of gestation) increased from 75 to 79 percent between 1981 and 1992, concurrent with a decline in postterm births, which fell by almost 40 percent during this period (16 to 10 percent). This decrease is likely due, at least in part, to the rapid rise in inductions of labor (57).

All of the small improvement in the incidence of preterm births occurred among preterm births to black mothers, which declined from 18.9 to 18.4 percent. Decreases were noted among black births of 28–36 weeks of gestation, but there was no change in the proportion of births at the greatest risk of poor outcome, those born under 28 weeks of gestation. Declines of 2–4 percent were observed for preterm births to black mothers in each age group except the youngest mothers and those 35 years of age and older. Among black mothers, the risk of preterm birth was lowest for mothers aged 20–29 years (17.5 percent) and highest for mothers under 15 years (26.9 percent).

The incidence of preterm births for white mothers was unchanged, at 9.1 percent. The risk of an early birth varied widely by age of mother, with rates ranging from 8.1 percent for mothers 25–29 years to 18.4 percent for mothers under 15 years of age. White teenage mothers 15–19 years were as likely as mothers 40 years and older to have a preterm birth (11.6 percent).

Black mothers were twice as likely as white mothers not to have a full-term pregnancy (18.4 compared with 9.1 percent). However, as preterm severity rises so, too, does the racial disparity. Black mothers were 70 percent more likely than white mothers to deliver at 34–36 weeks of gestation (11.2 compared with 6.6 percent), 2.5 times as likely to deliver at 28–33 weeks (5.3 compared with 2.1 percent), and four times as likely to deliver at less than 28 weeks (1.9 compared with 0.5 percent).

The shorter the length of gestation, the greater the risk of an adverse outcome as measured by low birthweight. Of extremely preterm infants, or those born at less than 28 weeks of gestation, 95 percent were low birthweight compared with 64 percent of infants born at 28–33 weeks and 28 percent of infants with gestations

of 34–36 weeks. Babies delivered at 34–36 weeks of gestation have been found to have little increased risk of morbidity or mortality when compared with term births (59).

Rates of preterm birth among other racial groups ranged from 7.0 percent for Chinese to 11.6 percent for American Indian mothers (table 23). The comparatively high proportion of preterm births among American Indians would seem to belie their overall favorable levels of low birthweight. However, a lower proportion of American Indian preterm infants (31 percent) were low birthweight than any of the other racial groups (for example, 40 percent of white preterm births and 47 percent of black preterm births).

Among Hispanic mothers, the proportion of births born preterm was the highest for Puerto Rican mothers (13.2 percent) and the lowest for Cuban mothers (10.0 percent) (table 24). The incidence of preterm birth was surprisingly high among Mexican mothers, at 10.4 percent, compared with white non-Hispanic mothers (8.7 percent), given the comparable levels of low birthweight of the two groups. However, as was the case for American Indian births, a relatively low proportion of Mexican preterm births were low birthweight (32 percent compared with 41 percent of white non-Hispanic preterm births) and, thus, were at less risk of poor outcome.

Weight at birth

The overall incidence of low birthweight (less than 2,500 grams) for 1992 was unchanged from the 1991 level of 7.1 percent, the highest level reported since 1978 (see tables 42–44 and figure 5). Low birthweight is a principal predictor of infant survival and potential morbidity (60,61). Following a high of 13.6 percent for 1991, the proportion low birthweight among black infants declined to 13.3 percent for 1992. No change was noted in the rate for white infants (5.8 percent). The incidence of very low birthweight (births of less than 1,500 grams) also was unchanged from 1991 (1.3 percent). The large racial disparity in very low birthweight was unabated as levels of very low birthweight among

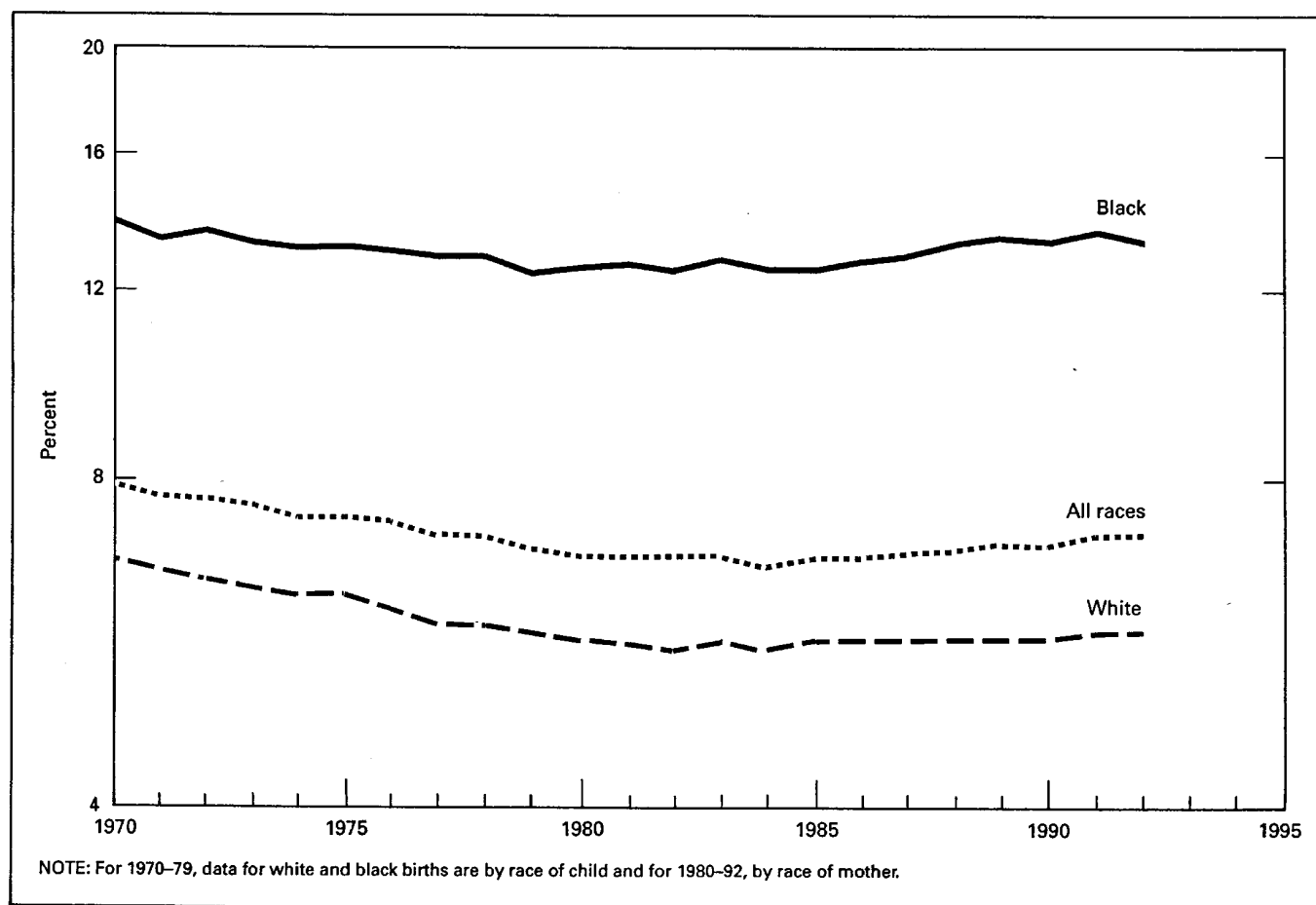


Figure 5. Percent low birthweight by race: United States, 1970-92

white (1.0 percent) and black births (3.0 percent) remained the same as in 1991.

The median birthweight for babies born in 1992 was 3,360 grams. The overall level was unchanged from 1991, the lowest median reported since 1981 (also 3,360). The median birthweight for white infants, at 3,410 grams, was also the same as the previous year. After a decline to 3,160 in 1991, the median birthweight for black babies returned to the level reported for 1990 (3,170).

There was essentially no change in patterns of low birthweight by age between 1991 and 1992. As in earlier years, the risk of low birthweight varied profoundly according to the age of the mother. Age-specific low-birthweight rates generally followed a U-shaped pattern, with the youngest and oldest mothers at the greatest risk, but with levels for mothers 40 years and older slightly lower than those for mothers under 20 years. Age-specific low-birthweight rates for births to white mothers followed a similar pattern, varying

widely from 10.2 percent for the youngest and oldest mothers to 5.1 percent for mothers aged 25-29 years. Conversely, there was less variation in low birthweight risk between age groups for black mothers, with only a 33-percent difference between the highest and lowest rates (16.2 compared with 12.2 percent).

Some reasons for the higher rate of low birthweight among black infants are that they are much more likely to be born preterm (at less than 37 completed weeks of gestation) and to have a lower weight gain during pregnancy. However, even for mothers with ideal weight gain and length of gestation, the risk of low birthweight for black infants is twice that for white infants (table 20).

There were no notable changes in low-birthweight levels for preterm (41.6 percent), term (37-41 weeks of gestation) (3.0 percent), or postterm births (42 weeks and over of gestation) (2.0 percent) from the previous year. As in prior years, the racial disparity in

low birthweight was greater for term than for preterm births. Whereas, low birthweight among preterm black births (47.0 percent) was 18 percent higher than that for white births (39.7 percent), black babies born at term (5.8 percent) were more than twice as likely to be born low birthweight as white term births (2.5 percent).

Infants born to American Indian mothers have a relatively favorable level of low birthweight (6.2 percent), despite high levels of teenage childbearing and numerous other demographic and medical risk factors (see medical risk factors section). This is due, in part, to the comparatively modest levels of low birthweight among American Indian teenagers—the lowest of any other racial or ethnic group in 1992 (6.2 percent).

Among Asian or Pacific Islander births, low birthweight levels ranged from a low of 5.0 percent for Chinese births, the lowest level reported for any racial or ethnic group, to 7.4 percent for

Filipino births. The only notable change from the previous year was a rise in low birthweight among Japanese births, from 5.9 to 7.0 percent. The disparity in levels of low birthweight reflects the breadth of heterogeneity among Asian and Pacific Islanders.

Infants of Asian or Pacific Islander mothers born abroad were at a lower risk of low birthweight than those of their U.S.-born counterparts (6.2 percent compared with 7.3 percent). This pattern has been found for each of the Asian or Pacific Islander groups and may be attributed, in part, to lower levels of tobacco use during pregnancy (table 23).

Among all Hispanic mothers, the incidence of low birthweight in 1992 was unchanged from 1991 (6.1 percent). Rates of low birthweight for the Hispanic subgroups (except Cuban) were essentially unchanged, ranging from 5.6 percent for infants born to Mexican mothers to 9.2 percent for Puerto Rican infants (table 24). For Cuban babies low birthweight increased from 5.6 to 6.1 percent between 1991 and 1992.

The very favorable pregnancy outcome, as measured by low birthweight, for Mexican women is an anomaly. The prevalence of traditional risk factors, including elevated rates of teenage childbearing, low educational levels, and inadequate prenatal care, would appear to place Mexican infants at great peril. Some possible explanations are that low levels of tobacco and alcohol use and adequate nutrition during pregnancy among pregnant Mexican women may offset sociodemographic risks. Interestingly, the rate of low birthweight for Mexican mothers born outside of the United States (5.1 percent) is substantially lower than that of their U.S.-born counterparts (6.5 percent). This suggests that the protective practices of Mexican mothers born abroad, which contribute to their good birth outcomes, may not be sustained in the second generation of Mexican mothers. (14,62).

Among the 51 reporting areas, the rate of low birthweight for births to white mothers ranged from 4.3 percent for Alaska and 4.6 percent for the District of Columbia, to 7.3 percent for New Mexico and 8.0 percent for Colorado. For States with at least 1,000 black births, the lowest rates were reported for Rhode

Island (9.3 percent) and Massachusetts (10.9 percent); the highest rates were reported in Colorado (16.9 percent) and the District of Columbia (16.4 percent) (table 16).

Interval since last live birth

Closely-spaced births are associated with higher levels of low birthweight and other adverse outcomes (63). For 1992, 13 percent of all second- and higher-order births occurred within the relatively short interval of 18 months from a previous live birth (tables 10 and 11); 9.1 percent of these births were low birthweight compared with 4.6 percent of infants born at 2 to 3 years of a previous live birth. The proportion of births occurring at the various intervals following the mother's last live birth has remained essentially stable since 1980. For 1992 about a quarter (27 percent) occurred within 2 years and about one-half (51 percent) within 3 years.

Black infants are more likely than white infants to be born at short intervals, reflecting the higher fertility and younger ages at the start of childbearing of black mothers. For 1992, 20 percent of black infants, compared with 12 percent of white, followed their mother's previous live birth by less than 18 months. When born at these shorter intervals, black infants are also more likely to be low birthweight than white infants (16.6 percent compared with 6.5 percent).

Apgar score

The Apgar score was developed by Virginia Apgar, M.D., in 1952 to measure the relative physical condition of babies just after delivery. There are five components to this score—heart rate, respiratory effort, muscle tone, reflex irritability, and the color of the newborn—which are each assigned a value of 0, 1, or 2. The total score is the sum of the scores of the five components and ranges from 0 to 10, with 7 or greater indicating good to excellent physical condition. The scores are assessed at two separate intervals, 1 minute after birth and then again at 5 minutes after birth. The 1- and 5-minute scores are inherently different because the latter reflects any care the baby received in the first 5 minutes. The Apgar scores are used as predictors of the babies'

chances of survival and of their long-term health with the 5-minute score generally regarded as the better of the two measures on which to do this. In 1992 all States except California and Texas reported information on Apgar score. These 48 States and the District of Columbia accounted for 77 percent of all U.S. births.

In 1992, 8.5 percent of babies had 1-minute Apgar scores that were considered low, less than 7 (table 23). Of these, 16 percent also had low 5-minute scores (tabular data not shown). Thus, 84 percent of babies with low 1-minute scores improved enough in the next 4 minutes to have 5-minute scores of 7 or higher. However, the percent that improved varied substantially by the severity of their initial physical condition, ranging from only 13 percent of babies with 1-minute scores of 0 to nearly all (98 percent) of babies with 1-minute scores of 6. Conversely, the physical conditions of less than 0.1 percent of babies that had good 1-minute scores deteriorated to the point where they had 5-minute scores less than 7. Altogether, 1.5 percent of babies had 5-minute Apgar scores that were less than 7.

The percent of babies having low 1- and 5-minute Apgar scores was highest for black mothers, intermediate for American Indian and white mothers, and lowest for Asian or Pacific Islander mothers. This is consistent with the fact that most Asian subgroups have fewer risk factors indicating adverse birth outcomes (for example, teenage births, tobacco and alcohol consumption during pregnancy, and inadequate weight gain) than other racial groups. The two Asian subgroups with the smallest percent of babies with low 1- and 5-minute Apgar scores were Chinese and Japanese mothers.

The findings regarding Apgar scores and Hispanic origin are similar to those for low birthweight (less than 2,500 grams); Hispanic infants tend to have good birth outcomes despite the economic and educational disadvantages of their mothers. Table 24 shows that the percent of Apgar scores less than 7 was lower for births to Hispanic mothers than for births to non-Hispanic mothers. Births to Cuban mothers had the lowest percent of babies with 1- and 5-minute Apgar

scores less than 7 of any Hispanic subgroup.

Abnormal conditions of the newborn

The abnormal conditions of the newborn with the highest rates per 1,000 live births in 1992 were assisted ventilation less than 30 minutes, 15 per 1,000; assisted ventilation 30 minutes or longer, 8 per 1,000; and hyaline membrane disease/respiratory distress syndrome (RDS), 6 per 1,000 (table 45).

Data for 1989–92 suggest substantial underreporting on the birth certificate for fetal alcohol syndrome (FAS). Of over 15.2 million live births in 1989–92, there were only 2,112 reported cases of FAS, a rate of 0.14 cases per 1,000 live births. The Centers for Disease Control and Prevention's Birth Defects Monitoring Program has estimated rates for FAS more than twice that derived from the birth certificate (64). FAS can be difficult to recognize because of the subtlety of facial malformations, the difficulty in detecting some types of central nervous system deficits, and because some of these infants are of normal birthweight (64). The identification of FAS often occurs after the birth certificate has been filed. Some physicians who suspect FAS do not make the diagnosis (65) because of the stigma associated with it. The related annual costs for FAS have been estimated to be \$250 million, of which nearly 60 percent is attributable to mental retardation (66).

The rates for abnormal conditions in 1992, as in the previous 3 years, were higher for black births than for white births for all conditions except assisted ventilation less than 30 minutes and birth injuries. The highest rates by age for anemia, hyaline membrane disease/RDS, and assisted ventilation (both less than 30 minutes and 30 minutes or longer) were for the youngest mothers (under 20 years of age).

The highest rates of meconium aspiration syndrome (MAS), which is associated with increased neonatal morbidity and mortality (67), were for the oldest mothers (40–49 years of age). Of the 9,757 reported cases of MAS, 63 percent also had meconium moderate/heavy reported as a complication of labor and/or

delivery (tabular data not shown). There is some debate about whether the pathology of MAS is more closely related to perinatal asphyxia than to meconium itself (68,69).

Only one abnormal condition, birth injury, had a lower rate among low-birthweight infants (less than 2,500 grams) compared with infants weighing 2,500 grams or more. The rate of hyaline membrane disease/RDS was far higher for low-birthweight infants than for those of higher weight (55 compared with 3 per 1,000 live births). There was a similar large difference in rates by birthweight for assisted ventilation 30 minutes or longer (64 and 4 per 1,000 live births). The rates of hyaline membrane disease/RDS and assisted ventilation 30 minutes or longer also were far higher for preterm births (less than 37 completed weeks gestation) than for births with longer gestation (tabular data not shown).

Assisted ventilation less than 30 minutes was the only condition with noticeable differences by education of mother (tabular data not shown here). Mothers with 0–8 years of education had a rate of 9.3 per 1,000 live births compared with 15.5 for mothers with more education. The lower level for mothers with 0–8 years of education is explained in part by the high proportion who were Hispanic (64 percent) and that the rate of this condition for these Hispanic mothers was 6.0 per 1,000. For non-Hispanic white and non-Hispanic black mothers with 0–8 years of education, the rates were 17.9 and 14.6 per 1,000, respectively.

Congenital anomalies

Congenital anomalies are the leading cause of infant mortality in the United States and are also a major contributor to childhood morbidity, long-term disability, and years of potential life lost (70). Since 1989, information for some of the most severe and common congenital anomalies has been available from a checkbox item on live birth certificates. The checkbox format replaced a previously open-ended question to improve completeness and uniformity of reporting. However, even this format does not ensure that all cases of anomalies will be reported. A recent study on the quality of reporting of

congenital anomalies on the new birth certificate found that there is still substantial underreporting of some anomalies (71). In 1992 the District of Columbia and all States except New Mexico and New York included a question on congenital anomalies on their birth certificate. These areas included 92 percent of the births in the United States.

Because many of the congenital anomalies tracked on birth certificates occur relatively infrequently, congenital anomaly rates in this report are calculated per 100,000 live births. Small yearly changes in rates should be interpreted with caution; the number of births with a specific anomaly for any one year may be relatively small, and reporting practices in some areas vary from year to year. The terms “congenital anomalies” and “birth defects” are used interchangeably in this discussion.

For many of the anomalies reported on birth certificates, rates vary widely according to maternal age (table 46). For anencephalus, spina bifida/meningocele, hydrocephalus, microcephalus, omphalocele/gastroschisis, and “Other” gastrointestinal anomalies, rates are generally highest for teenagers and decline somewhat for births to older mothers. This pattern is consistent with the decrease in incidence of these anomalies with added educational attainment (data not shown).

More commonly, however, rates of congenital anomalies tend to increase for older mothers. Notable examples are Down's syndrome and “Other” chromosomal anomalies. The rate of Down's syndrome for teenagers is 28.9, but nearly doubles to 56.0 for women 30–34 years, and is 12 times as high for women aged 40–49 years (343.0) as for teenagers. For “Other” chromosomal anomalies rates are 3.5 to 4 times as high for women aged 40–49 years as for women less than 35 years of age.

Anencephalus and spina bifida/meningocele are two of a class of neural tube defects (NTD's) reported on birth certificates. NTD's are among the most frequently occurring birth defects that result in infant mortality and serious disability (72). In 1992 the rate of anencephalus was 13.2 per 100,000 live births, and the rate of spina bifida/meningocele, 22.8 per 100,000 live births (table 46), but these rates are probably an underestimation of

the true occurrence (73). As noted earlier, rates for these NTD's decline with added educational attainment. Other studies have shown that women of lower socioeconomic status are at increased risk of having children with NTD's and that nutritional factors might explain this link (74). The U.S. Food and Drug Administration has proposed that bread and grain products be fortified with folic acid to help women of childbearing age ingest sufficient folic acid for preventing NTD's (75).

Although the rate of infant mortality due to birth defects is slightly higher for black than for white births (70), congenital anomaly rates for live births are higher for black than for white births for only 4 of the 20 anomalies identified on birth certificates (microcephalus, omphalocele/gastroschisis, "Other" gastrointestinal anomalies, and polydactyly/syndactyly/adactyly). The racial differential is particularly noticeable for polydactyly/syndactyly/adactyly. For this group of anomalies the rate for black births was nearly four times as high as the rate for white births (217.3 compared with 58.8).

Multiple births

There were 99,255 babies born in plural deliveries in 1992, a 1-percent increase over the 98,125 reported for 1991. (See table 47 for 1992 data.) The number of live births in twin deliveries was essentially unchanged, at 95,372 compared with 94,779 for 1991, but the number of live births in higher-order multiple deliveries (triplets, quadruplets, and quintuplets) rose sharply, from 3,346 to 3,883 births, an increase of 16 percent. Increases were reported for live births in triplet (3,130 to 3,555), quadruplet (203 to 310) and quintuplet deliveries (22 to 26) from the previous year. The elevated frequency of plural births for 1992 is attributable to the rise of these births among mothers 30 years of age and older.

Modest increases of 2 percent were noted in the multiple birth ratio (23.9 to 24.4 multiple births per 1,000 live births) and twin birth ratio (23.1 to 23.5 twin births per 1,000 live births) over 1991, continuing the steady upward trend evident since 1972. (Because most multiple births are twins, the multiple birth ratio

largely reflects the twinning ratio.) The higher-order multiple birth ratio, however, which relates the number of triplet and other higher-order multiple births per 100,000 live births, surpassed that of 1991 by 17 percent, rising from 81.4 to 95.5, the largest single-year increase in at least 20 years. This ratio has risen dramatically since 1972, climbing from 27.8 to 40.3 in 1982 and more than doubling over the latest 10-year period.

The multiple birth ratio increased between 1991 and 1992 for white mothers from 23.4 to 24.0 and for black mothers from 27.8 to 28.2. Although the black twin ratio remained higher than the white twin ratio in 1992 (27.6 compared with 23.0), the white higher-order multiple birth ratio (107.6) was twice as high as the black ratio (53.6). During the 1970's this ratio was actually higher for black than for white mothers, but by the early 1980's rates for white mothers began to exceed those for black mothers. The escalation in higher-order birth ratios has been associated with the increased use of fertility-enhancing drugs, especially among white mothers, and a shift toward older childbearing (76). A recent study has found that prescriptions for the drug most commonly prescribed for infertility had increased nearly twofold between 1973 and 1991, and that these drugs were most commonly prescribed for white females (77). Most of the increase among black women has been attributed to the upward shift in maternal age (76).

Mother and child are both at increased risk during a multiple pregnancy. Maternal risk is manifested in elevated rates of medical risk factors during pregnancy, such as anemia, hypertension, and eclampsia when compared with mothers of singletons. Mothers of multiple births also are much more likely to have a breech or other malpresentation and to deliver by cesarean section (78).

The risk to the infant in a multiple birth is evidenced by the very high rates of low birthweight (less than 2,500 grams) and preterm delivery (less than 37 completed weeks gestation) and the heightened risk of infant mortality and morbidity (79). The majority of multiple births are low birthweight or very low birthweight (less than 1,500 grams), and the magnitude of risk increases as the

number of births in the delivery rises. For 1992, 51 percent of all twins and 91 percent of all triplets and higher-order plural births were low birthweight compared with 6 percent of single births. The risk of being born at very low birthweight was 10 times as high for twin births as for single births (10 percent compared with 1 percent). Almost one of every three triplets, or other higher-order births, were very low birthweight (data not included in this report). The lower birthweight is due, in part, to the shorter gestational period of plural births (one-half of all plural births were preterm); but at each gestational period, plural births are more likely to be low birthweight (80).

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Symbols

- - - Data not available
 - . . . Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - * Figure does not meet standards of reliability or precision (see Technical notes)
-

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¹Includes American Indian and Asian or Pacific Islander.

²Non-Hispanic origin only.

³Includes American Indian, Chinese, Japanese, Hawaiian, Filipino and other Asian or Pacific Islander.

Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–92

[Birth rates are live births per 1,000 population in specified group. Fertility rates per 1,000 women aged 15–44 years in specified group. Population enumerated as of April 1 for census years and estimated as of July 1 for all other years. Beginning with 1970, excludes births to nonresidents of the United States]

Year	Number					Birth rate					Fertility rate				
	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander
Registered births															
Race of mother:															
1992	4,065,014	3,201,678	673,633	39,453	150,250	15.9	15.0	21.3	18.4	18.0	68.9	66.5	83.2	75.4	67.2
1991	4,110,907	3,241,273	682,602	38,841	145,372	16.3	15.4	21.9	18.3	18.2	69.6	67.0	85.2	75.1	67.6
1990	4,158,212	3,290,273	684,336	39,051	141,635	16.7	15.8	22.4	18.9	19.0	70.9	68.3	86.8	76.2	69.6
1989	4,040,958	3,192,355	673,124	39,478	133,075	16.4	15.4	22.3	19.7	18.7	69.2	66.4	86.2	79.0	68.2
1988	3,909,510	3,102,083	638,562	37,088	129,035	16.0	15.0	21.5	19.3	19.2	67.3	64.5	82.6	76.8	70.2
1987	3,809,394	3,043,828	611,173	35,322	116,560	15.7	14.9	20.8	19.1	18.4	65.8	63.3	80.1	75.6	67.1
1986	3,756,547	3,019,175	592,910	34,169	107,797	15.6	14.8	20.5	19.2	18.0	65.4	63.1	78.9	75.9	66.0
1985	3,760,561	3,037,913	581,824	34,037	104,606	15.8	15.0	20.4	19.8	18.7	66.3	64.1	78.8	78.6	68.4
1984 ³	3,669,141	2,967,100	568,138	33,256	98,926	15.6	14.8	20.1	20.1	18.8	65.5	63.2	78.2	79.8	69.2
1983 ³	3,638,933	2,946,468	562,624	32,881	95,713	15.6	14.8	20.2	20.6	19.5	65.7	63.4	78.7	81.8	71.7
1982 ³	3,680,537	2,984,817	568,506	32,436	93,193	15.9	15.1	20.7	21.1	20.3	67.3	64.8	80.9	83.6	74.8
1981 ³	3,629,238	2,947,679	564,955	29,688	84,553	15.8	15.0	20.8	20.0	20.1	67.3	64.8	82.0	79.6	73.7
1980 ³	3,612,258	2,936,351	568,080	29,389	74,355	15.9	15.1	21.3	20.7	19.9	68.4	65.6	84.7	82.7	73.2
Race of child:															
1980 ³	3,612,258	2,898,732	589,616	36,797	---	15.9	14.9	22.1	---	---	68.4	64.7	88.1	---	---
1979 ³	3,494,398	2,808,420	577,855	34,269	---	15.6	14.5	22.0	---	---	67.2	63.4	88.3	---	---
1978 ³	3,333,279	2,681,116	551,540	33,160	---	15.0	14.0	21.3	---	---	65.5	61.7	86.7	---	---
1977 ³	3,326,632	2,691,070	544,221	30,500	---	15.1	14.1	21.4	---	---	66.8	63.2	88.1	---	---
1976 ³	3,167,788	2,567,614	514,479	29,009	---	14.6	13.6	20.5	---	---	65.0	61.5	85.8	---	---
1975 ³	3,144,198	2,551,996	511,581	27,546	---	14.6	13.6	20.7	---	---	66.0	62.5	87.9	---	---
1974 ³	3,159,958	2,575,792	507,162	26,631	---	14.8	13.9	20.8	---	---	67.8	64.2	89.7	---	---
1973 ³	3,136,965	2,551,030	512,597	26,464	---	14.8	13.8	21.4	---	---	68.8	64.9	93.6	---	---
1972 ³	3,258,411	2,655,558	531,329	27,368	---	15.6	14.5	22.5	---	---	73.1	68.9	99.9	---	---
1971 ⁴	3,555,970	2,919,746	564,960	27,148	---	17.2	16.1	24.4	---	---	81.6	77.3	109.7	---	---
1970 ⁴	3,731,386	3,091,264	572,362	25,864	---	18.4	17.4	25.3	---	---	87.9	84.1	115.4	---	---
1969 ⁴	3,600,206	2,993,614	543,132	24,008	---	17.9	16.9	24.4	---	---	86.1	82.2	112.1	---	---
1968 ⁴	3,501,564	2,912,224	531,152	24,156	---	17.6	16.6	24.2	---	---	85.2	81.3	112.7	---	---
1967 ⁵	3,520,959	2,922,502	543,976	22,665	---	17.8	16.8	25.1	---	---	87.2	82.8	118.5	---	---
1966 ⁴	3,606,274	2,993,230	558,244	23,014	---	18.4	17.4	26.2	---	---	90.8	86.2	124.7	---	---
1965 ⁴	3,760,358	3,123,860	581,126	24,066	---	19.4	18.3	27.7	---	---	96.3	91.3	133.2	---	---
1964 ⁴	4,027,490	3,369,160	607,556	24,382	---	21.1	20.0	29.5	---	---	104.7	99.8	142.6	---	---
1963 ^{4,6}	4,098,020	3,326,344	580,658	22,358	---	21.7	20.7	---	---	---	108.3	103.6	---	---	---
1962 ^{4,6}	4,167,362	3,394,068	584,610	21,968	---	22.4	21.4	---	---	---	112.0	107.5	---	---	---
1961 ⁴	4,268,326	3,600,864	611,072	21,464	---	23.3	22.2	---	---	---	117.1	112.3	---	---	---
1960 ⁴	4,257,850	3,600,744	602,264	21,114	---	23.7	22.7	31.9	---	---	118.0	113.2	153.5	---	---
Births adjusted for underregistration															
Race of child:															
1955	4,097,000	3,485,000	---	---	---	25.0	23.8	---	---	---	118.3	113.7	---	---	---
1950	3,632,000	3,108,000	---	---	---	24.1	23.0	---	---	---	106.2	102.3	---	---	---
1945	2,858,000	2,471,000	---	---	---	20.4	19.7	---	---	---	85.9	83.4	---	---	---
1940	2,559,000	2,199,000	---	---	---	19.4	18.6	---	---	---	79.9	77.1	---	---	---

¹For 1960–91 includes births to races not shown separately; see Technical notes.

²Includes births to Aleuts and Eskimos.

³Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.

⁴Based on a 50-percent sample of births.

⁵Based on a 20- to 50-percent sample of births.

⁶Figures by race exclude data for New Jersey.

Table 2. Live births by age of mother, live-birth order, and race of mother: United States, 1992

[Live-birth order refers to number of children born alive to mother]

Live-birth order and race of mother	Age of mother													
	All ages	Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15 years	16 years	17 years	18 years	19 years						
All races	4,065,014	12,220	505,415	29,267	60,136	98,146	138,663	179,203	1,070,490	1,179,264	895,271	344,644	55,702	2,008
First child	1,632,448	11,702	375,145	27,087	52,443	78,650	100,312	116,653	496,541	428,590	236,102	73,284	10,746	338
Second child	1,311,397	79	101,658	1,924	6,743	16,371	30,410	46,210	356,332	412,901	318,736	107,012	14,040	317
Third child	665,150	31	22,162	102	624	2,407	6,333	12,696	147,649	208,936	195,374	79,527	11,148	323
Fourth child	260,751	7	3,799	8	45	264	953	2,529	47,120	78,866	82,260	41,099	7,349	251
Fifth child	98,448	—	508	6	7	27	95	373	13,604	28,073	32,147	19,565	4,339	212
Sixth child	41,066	—	59	—	2	2	12	43	3,582	10,441	14,340	9,916	2,603	125
Seventh child	18,512	—	11	—	—	—	4	7	900	3,906	6,510	5,344	1,735	106
Eighth child and over . .	18,787	—	6	—	—	—	2	4	340	2,269	5,458	6,994	3,404	316
Not stated	18,455	79	2,067	140	272	425	542	688	4,422	5,282	4,344	1,903	338	20
White	3,201,678	5,367	342,739	15,966	37,256	65,564	95,949	128,004	814,422	964,586	745,510	282,617	44,866	1,571
First child	1,307,908	5,165	267,038	15,154	33,711	55,317	73,945	88,911	400,407	363,040	200,704	62,236	9,031	287
Second child	1,056,557	153	62,426	699	3,144	8,980	18,586	31,017	275,205	346,310	271,201	89,342	11,658	262
Third child	517,417	15	10,475	34	221	930	2,748	6,542	100,937	167,205	163,851	65,653	9,019	262
Fourth child	190,948	5	1,339	—	16	70	297	956	26,954	57,830	65,717	33,069	5,834	200
Fifth child	66,236	—	150	3	1	7	29	110	6,150	17,858	23,655	14,965	3,288	170
Sixth child	26,190	—	20	—	2	1	4	13	1,313	5,690	9,868	7,259	1,957	83
Seventh child	11,356	—	3	—	—	—	1	2	275	1,795	4,117	3,798	1,297	71
Eighth child and over . .	11,535	—	5	—	—	—	2	3	147	883	2,985	4,785	2,510	220
Not stated	13,531	29	1,283	76	161	259	337	450	3,034	3,975	3,412	1,510	272	16
Black	673,633	6,448	146,800	12,432	20,970	29,600	38,362	45,436	216,057	157,960	100,339	39,389	6,453	187
First child	246,250	6,157	96,530	11,133	17,073	21,002	23,269	24,053	76,803	40,467	19,487	5,919	866	21
Second child	196,016	227	36,033	1,167	3,398	6,855	10,872	13,741	69,387	49,382	29,615	10,045	1,297	30
Third child	120,452	14	10,878	63	367	1,391	3,355	5,702	41,344	34,395	23,398	9,082	1,307	34
Fourth child	58,038	1	2,271	6	23	184	600	1,458	18,028	17,521	13,225	5,941	1,026	25
Fifth child	26,459	—	328	3	6	18	64	237	6,608	8,470	6,786	3,501	747	19
Sixth child	11,860	—	37	—	—	1	7	29	1,973	3,882	3,517	2,008	425	18
Seventh child	5,483	—	8	—	—	—	3	5	545	1,707	1,802	1,127	284	10
Eighth child and over . .	5,086	—	1	—	—	—	—	1	168	1,122	1,821	1,487	460	27
Not stated	3,989	49	714	60	103	149	192	210	1,201	1,014	688	279	41	3
American Indian ¹	39,453	169	7,708	455	1,004	1,545	2,106	2,598	12,959	9,825	5,928	2,406	447	11
First child	12,834	161	5,516	428	885	1,204	1,460	1,539	4,354	1,798	772	202	28	3
Second child	10,404	6	1,683	24	99	294	516	750	4,330	2,711	1,231	392	47	4
Third child	7,215	—	398	1	15	35	105	242	2,612	2,324	1,327	489	65	—
Fourth child	4,274	1	62	—	2	1	15	44	1,082	1,567	1,065	422	74	1
Fifth child	2,327	—	10	—	—	—	—	10	382	799	713	351	71	1
Sixth child	1,163	—	—	—	—	—	—	—	107	375	402	223	56	—
Seventh child	535	—	—	—	—	—	—	—	23	145	210	129	28	—
Eighth child and over . .	516	—	—	—	—	—	—	—	13	62	179	185	75	2
Not stated	185	1	39	2	3	11	10	13	56	44	29	13	3	—
Asian or Pacific Islander	150,250	236	8,168	414	906	1,437	2,246	3,165	27,052	46,893	43,494	20,232	3,936	239
First child	65,456	219	6,061	372	774	1,127	1,638	2,150	14,977	23,285	15,139	4,927	821	27
Second child	48,420	15	1,516	34	102	242	436	702	7,410	14,498	16,689	7,233	1,038	21
Third child	20,066	2	411	4	21	51	125	210	2,756	5,012	6,798	4,303	757	27
Fourth child	7,491	—	127	2	4	9	41	71	1,056	1,948	2,253	1,667	415	25
Fifth child	3,426	—	20	—	—	2	2	16	464	946	993	748	233	22
Sixth child	1,853	—	2	—	—	—	1	1	189	494	553	426	165	24
Seventh child	1,138	—	—	—	—	—	—	—	57	259	381	290	126	25
Eighth child and over . .	1,650	—	—	—	—	—	—	—	12	202	473	537	359	67
Not stated	750	—	31	2	5	6	3	15	131	249	215	101	22	1

¹Includes births to Aleuts and Eskimos.

Table 3. Birth rates by age of mother, live-birth order, and race of mother: United States, 1992

[Rates are live births per 1,000 women in specified age and racial group. Live-birth order refers to number of children born alive to mother]

Live-birth order and race of mother	Age of mother										
	15–19 years										
	15–44 years ¹	10–14 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
All races.	68.9	1.4	60.7	37.8	94.5	114.6	117.4	80.2	32.5	5.9	0.3
First child	27.8	1.3	45.3	32.0	64.7	53.4	42.8	21.2	6.9	1.1	0.0
Second child	22.3	0.0	12.3	5.1	22.9	38.3	41.3	28.7	10.1	1.5	0.0
Third child.	11.3	0.0	2.7	0.6	5.7	15.9	20.9	17.6	7.5	1.2	0.0
Fourth child.	4.4	*	0.5	0.1	1.0	5.1	7.9	7.4	3.9	0.8	0.0
Fifth child	1.7	*	0.1	0.0	0.1	1.5	2.8	2.9	1.9	0.5	0.0
Sixth and seventh child	1.0	*	0.0	*	0.0	0.5	1.4	1.9	1.4	0.5	0.0
Eighth child and over	0.3	*	*	*	*	0.0	0.2	0.5	0.7	0.4	0.0
White.	66.5	0.8	51.8	30.1	83.8	108.2	118.4	81.4	32.2	5.7	0.2
First child	27.3	0.7	40.5	26.5	61.1	53.4	44.7	22.0	7.1	1.1	0.0
Second child	22.0	0.0	9.5	3.3	18.6	36.7	42.7	29.7	10.2	1.5	0.0
Third child.	10.8	*	1.6	0.3	3.5	13.5	20.6	18.0	7.5	1.1	0.0
Fourth child.	4.0	*	0.2	0.0	0.5	3.6	7.1	7.2	3.8	0.7	0.0
Fifth child	1.4	*	0.0	*	0.1	0.8	2.2	2.6	1.7	0.4	0.0
Sixth and seventh child	0.8	*	0.0	*	0.0	0.2	0.9	1.5	1.3	0.4	0.0
Eighth child and over	0.2	*	*	*	*	0.0	0.1	0.3	0.5	0.3	0.0
Black.	83.2	4.7	112.4	81.3	157.9	158.0	111.2	67.5	28.8	5.6	0.2
First child	30.6	4.5	74.3	63.8	89.6	56.5	28.7	13.2	4.4	0.8	0.0
Second child	24.3	0.2	27.7	14.8	46.6	51.0	35.0	20.1	7.4	1.1	0.0
Third child.	15.0	*	8.4	2.4	17.1	30.4	24.4	15.8	6.7	1.1	0.0
Fourth child.	7.2	*	1.7	0.3	3.9	13.3	12.4	9.0	4.4	0.9	0.0
Fifth child	3.3	*	0.3	0.0	0.6	4.9	6.0	4.6	2.6	0.7	*
Sixth and seventh child	2.2	*	0.0	*	0.1	1.9	4.0	3.6	2.3	0.6	0.0
Eighth child and over	0.6	*	*	*	*	0.1	0.8	1.2	1.1	0.4	0.0
American Indian ²	75.4	1.6	84.4	53.8	132.6	145.5	109.4	63.0	28.0	6.1	*
First child	24.6	1.5	60.7	45.3	85.0	49.1	20.1	8.2	2.4	0.4	*
Second child	20.0	*	18.5	7.5	35.9	48.8	30.3	13.1	4.6	0.6	*
Third child.	13.8	*	4.4	0.9	9.8	29.5	26.0	14.2	5.7	0.9	*
Fourth child.	8.2	*	0.7	*	1.7	12.2	17.5	11.4	4.9	1.0	*
Fifth child	4.5	*	*	*	*	4.3	8.9	7.6	4.1	1.0	*
Sixth and seventh child	3.3	*	*	*	*	1.5	5.8	6.5	4.1	1.2	*
Eighth child and over	1.0	*	*	*	*	*	0.7	1.9	2.2	1.0	*
Asian or Pacific Islander	67.2	0.7	26.6	15.2	43.1	74.6	121.0	103.0	50.6	11.0	0.9
First child	29.4	0.7	19.8	12.6	30.2	41.5	60.4	36.0	12.4	2.3	0.1
Second child	21.8	*	4.9	2.1	9.1	20.5	37.6	39.7	18.2	2.9	0.1
Third child.	9.0	*	1.3	0.4	2.7	7.6	13.0	16.2	10.8	2.1	0.1
Fourth child.	3.4	*	0.4	*	0.9	2.9	5.1	5.4	4.2	1.2	0.1
Fifth child	1.5	*	0.1	*	*	1.3	2.5	2.4	1.9	0.7	0.1
Sixth and seventh child	1.3	*	*	*	*	0.7	2.0	2.2	1.8	0.8	0.2
Eighth child and over	0.7	*	*	*	*	*	0.5	1.1	1.4	1.0	0.3

¹Rates computed by relating total births, regardless of age of mother, to women aged 15–44 years.²Includes births to Aleuts and Eskimos.

Table 4. Total fertility rates and birth rates by age of mother and race: United States, 1970–92

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group enumerated as of April 1 for 1970, 1980, and 1990, and estimated as of July 1 for all other years]

		Age of mother										
		15–19 years										
Year and race	Total fertility rate	10–14 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	
All races ¹												
1992	2,065.0	1.4	60.7	37.8	94.5	114.6	117.4	80.2	32.5	5.9	0.3	
1991	2,073.0	1.4	62.1	38.7	94.4	115.7	118.2	79.5	32.0	5.5	0.2	
1990	2,081.0	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2	
1989	2,014.0	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2	
1988	1,934.0	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2	
1987	1,872.0	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2	
1986	1,837.5	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2	
1985	1,844.0	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2	
1984 ²	1,806.5	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2	
1983 ²	1,799.0	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2	
1982 ²	1,827.5	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2	
1981 ²	1,812.0	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2	
1980 ²	1,839.5	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2	
1979 ²	1,808.0	1.2	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2	
1978 ²	1,760.0	1.2	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2	
1977 ²	1,789.5	1.2	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2	
1976 ²	1,738.0	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2	
1975 ²	1,774.0	1.3	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3	
1974 ²	1,835.0	1.2	57.5	37.3	88.7	117.7	111.5	53.8	20.2	4.8	0.3	
1973 ²	1,879.0	1.2	59.3	38.5	91.2	119.7	112.2	55.6	22.1	5.4	0.3	
1972 ²	2,010.0	1.2	61.7	39.0	96.9	130.2	117.7	59.8	24.8	6.2	0.4	
1971 ³	2,266.5	1.1	64.5	38.2	105.3	150.1	134.1	67.3	28.7	7.1	0.4	
1970 ³	2,480.0	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5	
White												
Race of mother:												
1992	1,993.5	0.8	51.8	30.1	83.8	108.2	118.4	81.4	32.2	5.7	0.2	
1991	1,995.5	0.8	52.8	30.7	83.5	109.0	118.8	80.5	31.8	5.2	0.2	
1990	2,003.0	0.7	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2	
1989	1,931.0	0.7	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2	
1988	1,856.5	0.6	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2	
1987	1,804.5	0.6	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2	
1986	1,776.0	0.6	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2	
1985	1,787.0	0.6	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2	
1984 ²	1,748.5	0.6	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2	
1983 ²	1,740.5	0.6	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2	
1982 ²	1,767.0	0.6	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2	
1981 ²	1,748.0	0.5	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2	
1980 ²	1,773.0	0.6	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2	
Race of child:												
1980 ²	1,748.5	0.6	44.7	25.2	72.1	109.5	112.4	60.4	18.5	3.4	0.2	
1979 ²	1,715.5	0.6	43.7	24.7	71.0	107.0	110.8	59.0	18.3	3.5	0.2	
1978 ²	1,667.5	0.6	42.9	24.9	69.4	104.1	107.9	56.6	17.7	3.5	0.2	
1977 ²	1,703.0	0.6	44.1	26.1	70.5	107.7	110.9	55.3	18.0	3.8	0.2	
1976 ²	1,652.0	0.6	44.1	26.3	70.2	105.3	105.9	52.6	17.8	3.9	0.2	
1975 ²	1,686.0	0.6	46.4	28.0	74.0	108.2	108.1	51.3	18.2	4.2	0.2	
1974 ²	1,748.5	0.6	47.9	28.7	77.3	113.0	111.8	52.9	18.9	4.4	0.2	
1973 ²	1,783.0	0.6	49.0	29.2	79.3	114.4	112.3	54.4	20.7	4.9	0.3	
1972 ²	1,906.5	0.5	51.0	29.3	84.3	124.8	117.4	58.4	23.3	5.6	0.3	
1971 ³	2,160.5	0.5	53.6	28.5	92.3	144.9	134.0	65.4	26.9	6.4	0.4	
1970 ³	2,385.0	0.5	57.4	29.2	101.5	163.4	145.9	71.9	30.0	7.5	0.4	

See footnotes at end of table.

Table 4. Total fertility rates and birth rates by age of mother and race: United States, 1970–92—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group enumerated as of April 1 for 1970, 1980, and 1990, and estimated as of July 1 for all other years]

		Age of mother									
		15–19 years									
Year and race	Total fertility rate	10–14 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
Black											
Race of mother:											
1992.	2,442.0	4.7	112.4	81.3	157.9	158.0	111.2	67.5	28.8	5.6	0.2
1991.	2,480.0	4.8	115.5	84.1	158.6	160.9	113.1	67.7	28.3	5.5	0.2
1990.	2,480.0	4.9	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1989.	2,432.5	5.1	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3
1988.	2,298.0	4.9	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3
1987.	2,198.0	4.8	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2
1986.	2,135.5	4.7	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3
1985.	2,109.0	4.5	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3
1984 ²	2,070.5	4.4	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2
1983 ²	2,066.0	4.1	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3
1982 ²	2,106.5	4.0	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4
1981 ²	2,117.5	4.0	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3
1980 ²	2,176.5	4.3	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3
Race of child:											
1980 ²	2,266.0	4.3	100.0	73.6	138.8	146.3	109.1	62.9	24.5	5.8	0.3
1979 ²	2,263.2	4.6	101.7	75.7	140.4	146.3	108.2	60.7	24.7	6.1	0.4
1978 ²	2,218.0	4.4	100.9	75.0	139.7	143.8	105.4	58.3	24.3	6.1	0.4
1977 ²	2,251.0	4.7	104.7	79.6	142.9	144.4	106.4	57.5	25.4	6.6	0.5
1976 ²	2,187.0	4.7	104.9	80.3	142.5	140.5	101.6	53.6	24.8	6.8	0.5
1975 ²	2,243.0	5.1	111.8	85.6	152.4	142.8	102.2	53.1	25.6	7.5	0.5
1974 ²	2,298.5	5.0	116.5	90.0	158.7	146.7	102.2	54.1	27.0	7.6	0.6
1973 ²	2,411.0	5.4	123.1	96.0	166.6	153.1	103.9	58.1	29.4	8.6	0.6
1972 ²	2,601.0	5.1	129.8	99.5	179.5	165.0	112.4	64.0	33.4	9.8	0.7
1971 ³	2,902.0	5.1	134.5	99.4	192.6	186.6	128.0	74.8	38.9	11.6	0.9
1970 ³	3,099.5	5.2	140.7	101.4	204.9	202.7	136.3	79.6	41.9	12.5	1.0
American Indian ⁴											
Race of mother:											
1992.	2,190.0	1.6	84.4	53.8	132.6	145.5	109.4	63.0	28.0	6.1	*
1991.	2,169.0	1.6	85.0	52.7	134.3	144.9	106.9	61.9	27.2	5.9	0.4
1990.	2,183.0	1.6	81.1	48.5	129.3	148.7	110.3	61.5	27.5	5.9	*
1989.	2,247.0	1.5	82.7	51.6	128.9	152.4	114.2	64.8	27.4	6.4	*
1988.	2,153.5	1.7	77.5	49.7	121.1	145.2	110.9	64.5	25.6	5.3	*
1987.	2,099.0	1.7	77.2	48.8	122.2	140.0	107.9	63.0	24.4	5.6	*
1986.	2,082.0	1.8	78.1	48.7	125.3	138.8	107.9	60.7	23.8	5.3	*
1985.	2,128.0	1.7	79.2	47.7	124.1	139.1	109.6	62.6	27.4	6.0	*
1984 ²	2,136.0	1.7	81.5	50.7	124.7	142.4	109.2	60.5	26.3	5.6	*
1983 ²	2,180.5	1.9	84.2	55.2	121.4	145.5	113.7	58.9	25.5	6.4	*
1982 ²	2,213.0	1.4	83.5	52.6	127.6	148.1	115.8	60.9	26.9	6.0	*
1981 ²	2,090.0	2.1	78.4	49.7	121.5	141.2	105.6	58.9	25.2	6.6	*
1980 ²	2,162.5	1.9	82.2	51.5	129.5	143.7	106.6	61.8	28.1	8.2	*

See footnotes at end of table.

Table 4. Total fertility rates and birth rates by age of mother and race: United States, 1970–92—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group enumerated as of April 1 for 1970, 1980, and 1990, and estimated as of July 1 for all other years]

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15–17 years	18–19 years						
Asian or Pacific Islander											
Race of mother:											
1992.	1,942.0	0.7	26.6	15.2	43.1	74.6	121.0	103.0	50.6	11.0	0.9
1991.	1,956.0	0.8	27.4	16.1	43.1	75.2	123.2	103.3	49.0	11.2	0.8
1990.	2,002.5	0.7	26.4	16.0	40.2	79.2	126.3	106.5	49.6	10.7	1.1
1989.	1,947.5	0.6	25.6	15.0	40.4	78.8	124.0	102.3	47.0	10.2	1.0
1988.	1,983.5	0.6	24.2	13.6	39.6	80.7	128.0	104.4	47.5	10.3	1.0
1987.	1,886.0	0.6	22.4	12.6	37.0	79.7	122.7	97.0	44.2	9.5	1.1
1986.	1,836.0	0.5	22.8	12.1	38.8	79.2	119.9	92.6	41.9	9.3	1.0
1985.	1,885.0	0.4	23.8	12.5	40.8	83.6	123.0	93.6	42.7	8.7	1.2
1984 ²	1,892.0	0.5	24.2	12.6	40.7	86.7	124.3	92.4	40.6	8.7	1.0
1983 ²	1,943.5	0.5	26.1	12.9	44.5	94.0	126.2	93.3	39.4	8.2	1.0
1982 ²	2,015.5	0.4	29.4	14.0	50.8	98.9	130.9	94.4	39.2	8.8	1.1
1981 ²	1,976.0	0.3	28.5	13.4	49.5	96.4	129.1	93.4	38.0	8.6	0.9
1980 ²	1,953.5	0.3	26.2	12.0	46.2	93.3	127.4	96.0	38.3	8.5	0.7

¹For 1970–91 includes births to races not shown separately; see Technical notes.

²Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.

³Based on a 50-percent sample of births.

⁴Includes births to Aleuts and Eskimos.

Table 5. Birth rates by live-birth order and race of mother: United States, 1980–92

[Rates are live births per 1,000 women aged 15–44 years, enumerated as of April 1 for 1980 and 1990, and estimated as of July 1 for all other years. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Year and race of mother	Total	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
All races ¹								
1992	68.9	27.8	22.3	11.3	4.4	1.7	1.0	0.3
1991	69.6	28.3	22.4	11.4	4.5	1.7	1.0	0.3
1990	70.9	29.0	22.8	11.7	4.5	1.7	1.0	0.3
1989	69.2	28.4	22.4	11.3	4.3	1.6	0.9	0.3
1988	67.3	27.6	22.0	10.9	4.1	1.5	0.9	0.3
1987	65.8	27.2	21.6	10.5	3.9	1.4	0.8	0.3
1986	65.4	27.2	21.6	10.3	3.8	1.4	0.8	0.3
1985	66.3	27.6	22.0	10.4	3.8	1.4	0.8	0.3
1984 ²	65.5	27.4	21.7	10.1	3.7	1.4	0.9	0.3
1983 ²	65.7	27.8	21.5	10.1	3.7	1.4	0.9	0.3
1982 ²	67.3	28.6	22.0	10.2	3.8	1.4	0.9	0.3
1981 ²	67.3	29.0	21.6	10.1	3.8	1.5	0.9	0.4
1980 ²	68.4	29.5	21.8	10.3	3.9	1.5	1.0	0.4
White								
1992	66.5	27.3	22.0	10.8	4.0	1.4	0.8	0.2
1991	67.0	27.8	22.0	10.8	4.0	1.4	0.8	0.2
1990	68.3	28.4	22.4	11.1	4.0	1.4	0.8	0.2
1989	66.4	27.6	21.9	10.7	3.8	1.3	0.7	0.2
1988	64.5	26.8	21.6	10.4	3.6	1.2	0.7	0.2
1987	63.3	26.5	21.3	10.0	3.5	1.2	0.7	0.2
1986	63.1	26.6	21.3	9.8	3.4	1.2	0.7	0.2
1985	64.1	27.0	21.8	9.9	3.4	1.2	0.7	0.2
1984 ²	63.2	26.8	21.4	9.6	3.3	1.2	0.7	0.2
1983 ²	63.4	27.2	21.2	9.5	3.3	1.2	0.7	0.2
1982 ²	64.8	28.0	21.6	9.6	3.4	1.2	0.7	0.3
1981 ²	64.8	28.4	21.1	9.5	3.4	1.2	0.8	0.3
1980 ²	65.6	28.8	21.3	9.6	3.4	1.3	0.8	0.3
Black								
1992	83.2	30.6	24.3	15.0	7.2	3.3	2.2	0.6
1991	85.2	31.5	25.0	15.4	7.4	3.3	2.1	0.6
1990	86.8	32.4	25.6	15.6	7.4	3.2	2.0	0.6
1989	86.2	32.9	25.4	15.3	7.1	3.0	1.9	0.6
1988	82.6	31.8	24.6	14.4	6.6	2.8	1.8	0.5
1987	80.1	31.2	23.8	13.9	6.3	2.7	1.7	0.5
1986	78.9	31.0	23.4	13.5	6.1	2.6	1.7	0.5
1985	78.8	31.0	23.4	13.4	6.1	2.6	1.7	0.5
1984 ²	78.1	30.9	23.0	13.2	6.0	2.6	1.7	0.6
1983 ²	78.7	31.1	23.1	13.2	6.1	2.7	1.8	0.6
1982 ²	80.9	31.7	23.9	13.8	6.3	2.7	1.8	0.7
1981 ²	82.0	32.3	24.2	13.7	6.3	2.8	1.9	0.8
1980 ²	84.9	33.7	24.7	14.0	6.5	2.9	2.1	0.9

¹Includes races other than white and black.

²Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.

Table 6. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 1992

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	Age of mother													
	All ages	Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15 years	16 years	17 years	18 years	19 years						
Hispanic														
Total	643,271	2,715	107,421	6,911	14,069	21,679	29,075	35,687	203,943	174,834	104,527	41,540	7,954	337
First child	241,894	2,604	78,899	6,417	12,140	17,228	20,594	22,520	88,785	46,980	18,392	5,380	823	31
Second child	186,606	88	22,721	444	1,698	3,826	6,894	9,859	69,507	56,626	27,872	8,546	1,214	32
Third child	114,547	8	4,542	22	133	496	1,279	2,612	30,977	40,382	27,282	9,819	1,500	37
Fourth child	54,735	3	696	—	13	37	176	470	10,160	18,804	16,249	7,403	1,374	46
Fifth child	23,382	—	84	1	—	4	20	59	2,771	7,267	7,678	4,570	960	52
Sixth child	10,307	—	9	—	1	1	1	6	685	2,651	3,664	2,563	703	32
Seventh child	4,676	—	4	—	—	—	2	2	149	920	1,678	1,409	493	23
Eighth child and over	4,371	—	1	—	—	—	1	—	68	444	1,263	1,658	855	82
Not stated	2,753	12	465	27	84	87	108	159	841	760	449	192	32	2
Mexican														
Total	432,047	1,828	75,956	4,757	9,735	15,255	20,645	25,564	143,074	114,876	65,190	25,843	5,049	231
First child	159,943	1,763	56,082	4,419	8,451	12,218	14,732	16,262	61,882	27,816	9,413	2,582	391	14
Second child	122,052	55	16,098	317	1,154	2,648	4,882	7,097	49,356	36,413	15,264	4,286	560	20
Third child	77,645	6	3,119	15	92	333	886	1,793	21,937	28,233	17,634	5,859	839	18
Fourth child	39,206	2	461	—	9	23	102	327	7,091	13,842	11,764	5,116	898	32
Fifth child	17,435	—	49	1	—	3	8	37	1,931	5,440	5,837	3,444	697	37
Sixth child	7,869	—	7	—	1	1	1	4	465	1,962	2,850	2,013	549	23
Seventh child	3,641	—	2	—	—	—	1	1	99	681	1,328	1,136	378	17
Eighth child and over	3,519	—	—	—	—	—	—	—	49	309	1,004	1,359	729	69
Not stated	737	2	138	5	28	29	33	43	264	180	96	48	8	1
Puerto Rican														
Total	59,569	403	12,350	946	1,793	2,578	3,257	3,776	19,856	15,045	8,261	3,062	567	25
First child	22,813	384	8,478	865	1,484	1,942	2,119	2,068	7,518	4,118	1,716	524	71	4
Second child	17,519	11	2,804	65	256	498	848	1,137	6,485	4,803	2,509	781	123	3
Third child	10,450	1	698	2	16	88	201	391	3,633	3,209	2,023	746	137	3
Fourth child	4,576	1	147	—	1	10	40	96	1,323	1,524	1,026	458	95	2
Fifth child	1,866	—	20	—	—	1	5	14	423	663	447	249	61	3
Sixth child	762	—	2	—	—	—	—	2	110	283	221	113	28	5
Seventh child	325	—	2	—	—	—	1	1	31	110	99	62	21	—
Eighth child and over	287	—	1	—	—	—	1	—	8	69	93	88	24	4
Not stated	971	6	198	14	36	39	42	67	325	266	127	41	7	1
Cuban														
Total	11,472	22	797	44	88	135	222	308	2,106	4,113	3,149	1,087	195	3
First child	4,877	22	645	41	81	119	182	222	1,227	1,824	891	234	34	—
Second child	4,061	—	131	2	7	15	38	69	642	1,504	1,302	404	76	2
Third child	1,744	—	20	1	—	1	2	16	172	555	665	291	40	1
Fourth child	508	—	1	—	—	—	—	1	46	155	184	102	20	—
Fifth child	154	—	—	—	—	—	—	—	11	39	62	32	10	—
Sixth child	57	—	—	—	—	—	—	—	2	14	23	11	7	—
Seventh child	27	—	—	—	—	—	—	—	—	6	8	5	8	—
Eighth child and over	13	—	—	—	—	—	—	—	—	2	6	5	—	—
Not stated	31	—	—	—	—	—	—	—	6	14	8	3	—	—

See footnotes at end of table.

Table 6. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 1992—Con.

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	Age of mother													
	All ages	Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15 years	16 years	17 years	18 years	19 years						
Central and South American. .	89,031	199	8,342	463	973	1,610	2,275	3,021	22,866	27,848	19,667	8,452	1,593	64
First child	34,080	184	6,453	434	862	1,329	1,717	2,111	11,645	9,427	4,605	1,514	242	10
Second child	27,261	13	1,552	26	98	256	461	711	7,399	9,545	6,128	2,273	347	4
Third child	15,993	1	254	1	7	18	69	159	2,710	5,585	4,958	2,127	344	14
Fourth child	6,687	—	30	—	—	1	12	17	764	2,063	2,269	1,275	277	9
Fifth child	2,557	—	5	—	—	—	2	3	151	715	926	604	144	12
Sixth child	1,030	—	—	—	—	—	—	—	37	223	369	305	93	3
Seventh child	442	—	—	—	—	—	—	—	5	68	160	146	58	5
Eighth child and over	350	—	—	—	—	—	—	—	8	32	95	135	73	7
Not stated	631	1	48	2	6	6	14	20	147	190	157	73	15	—
Other and unknown														
Hispanic	51,152	263	9,976	701	1,480	2,101	2,676	3,018	16,041	12,952	8,260	3,096	550	14
First child	20,181	251	7,241	658	1,262	1,620	1,844	1,857	6,513	3,795	1,767	526	85	3
Second child	15,713	9	2,136	34	183	409	665	845	5,625	4,361	2,669	802	108	3
Third child	8,715	—	451	3	18	56	121	253	2,525	2,800	2,002	796	140	1
Fourth child	3,758	—	57	—	3	3	22	29	936	1,220	1,006	452	84	3
Fifth child	1,370	—	10	—	—	—	5	5	255	410	406	241	48	—
Sixth child	589	—	—	—	—	—	—	—	71	169	201	121	26	1
Seventh child	241	—	—	—	—	—	—	—	14	55	83	60	28	1
Eighth child and over	202	—	—	—	—	—	—	—	3	32	65	71	29	2
Not stated	383	3	81	6	14	13	19	29	99	110	61	27	2	—
Non-Hispanic														
Total ¹	3,365,862	9,397	393,248	22,128	45,527	75,595	108,262	141,736	854,646	987,714	775,855	296,828	46,553	1,621
First child	1,368,298	9,012	292,709	20,465	39,843	60,715	78,737	92,949	402,193	374,984	213,213	66,268	9,622	297
Second child	1,107,675	304	78,135	1,469	4,994	12,436	23,281	35,955	283,145	350,933	285,810	96,528	12,545	275
Third child	542,423	23	17,454	80	489	1,893	5,011	9,981	115,190	166,084	165,392	68,531	9,468	281
Fourth child	202,832	4	3,079	8	32	227	770	2,042	36,517	59,120	64,924	33,153	5,832	203
Fifth child	73,868	—	419	5	7	23	74	310	10,704	20,466	24,040	14,752	3,332	155
Sixth child	30,192	—	49	—	1	1	11	36	2,868	7,650	10,466	7,209	1,863	87
Seventh child	13,529	—	7	—	—	—	2	5	740	2,922	4,721	3,845	1,212	82
Eighth child and over	13,999	—	5	—	—	—	1	4	265	1,800	4,094	5,168	2,441	226
Not stated	13,046	54	1,391	101	161	300	375	454	3,024	3,755	3,195	1,374	238	15
White	2,527,207	2,689	234,338	9,086	23,211	43,771	66,535	91,735	605,526	779,761	630,853	236,747	36,090	1,203
First child	1,052,986	2,606	187,274	8,762	21,592	37,961	53,030	65,929	308,938	311,520	178,881	55,562	7,959	246
Second child	859,668	61	39,665	267	1,460	5,178	11,688	21,072	204,188	286,310	239,629	79,345	10,247	223
Third child	398,834	7	5,951	12	91	441	1,480	3,927	69,557	125,659	134,926	55,114	7,399	221
Fourth child	134,994	2	651	—	3	34	124	490	16,738	38,717	48,968	25,385	4,379	154
Fifth child	42,509	—	65	2	1	3	9	50	3,388	10,524	15,816	10,292	2,310	114
Sixth child	15,735	—	11	—	1	—	3	7	639	3,036	6,123	4,638	1,238	50
Seventh child	6,571	—	—	—	—	—	—	—	130	871	2,387	2,344	791	48
Eighth child and over	6,946	—	4	—	—	—	1	3	78	443	1,677	3,024	1,584	136
Not stated	8,964	13	717	43	63	154	200	257	1,870	2,681	2,446	1,043	183	11
Black	657,450	6,339	144,259	12,258	20,598	29,072	37,698	44,633	211,468	153,557	97,263	38,163	6,223	178
First child	240,364	6,062	94,750	10,978	16,763	20,594	22,838	23,577	74,918	39,184	18,863	5,724	842	21
Second child	191,637	222	35,519	1,153	3,350	6,768	10,722	13,526	67,964	48,088	28,819	9,753	1,245	27
Third child	117,638	14	10,751	63	364	1,374	3,309	5,641	40,632	33,493	22,651	8,798	1,265	34
Fourth child	56,675	1	2,250	6	23	184	593	1,444	17,774	17,091	12,792	5,759	984	24
Fifth child	25,897	—	327	3	6	18	64	236	6,527	8,302	6,594	3,401	727	19
Sixth child	11,581	—	36	—	—	1	7	28	1,947	3,790	3,434	1,948	410	16
Seventh child	5,354	—	7	—	—	—	2	5	536	1,666	1,768	1,099	269	9
Eighth child and over	4,982	—	1	—	—	—	—	1	163	1,107	1,792	1,449	445	25
Not stated	3,322	40	618	55	92	133	163	175	1,007	836	550	232	36	3

¹Includes races other than white and black.

NOTE: Excludes data for New Hampshire, which did not require reporting of Hispanic origin of mother.

Table 7. Estimated birth rates by age of mother, live-birth order, Hispanic origin of mother, and by race of mother for mothers of non-Hispanic origin: United States, 1992

[Live-birth order refers to number of children born alive to mother]

Live-birth order and origin of mother	Age of mother										
	15–19 years										
	15–44 years ¹	10–14 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
Hispanic											
Total	108.6	2.6	107.1	71.4	159.7	190.6	154.4	96.8	45.6	10.9	0.6
First child	41.0	2.5	79.0	60.1	106.7	83.3	41.7	17.1	5.9	1.1	0.1
Second child	31.6	0.1	22.7	10.0	41.5	65.2	50.2	25.9	9.4	1.7	0.1
Third child	19.4	*	4.5	1.1	9.6	29.1	35.8	25.4	10.8	2.1	0.1
Fourth child	9.3	*	0.7	0.1	1.6	9.5	16.7	15.1	8.2	1.9	0.1
Fifth child	4.0	*	0.1	*	0.2	2.6	6.4	7.1	5.0	1.3	0.1
Sixth and seventh child	2.5	*	*	*	*	0.8	3.2	5.0	4.4	1.6	0.1
Eighth child and over	0.7	*	*	*	*	0.1	0.4	1.2	1.8	1.2	0.1
Mexican											
Total	116.0	2.5	108.8	---	---	202.3	166.3	99.1	47.7	11.8	0.8
First child	43.0	2.4	80.5	---	---	87.7	40.3	14.3	4.8	0.9	*
Second child	32.8	0.1	23.1	---	---	69.9	52.8	23.2	7.9	1.3	0.1
Third child	20.9	*	4.5	---	---	31.1	40.9	26.8	10.8	2.0	*
Fourth child	10.5	*	0.7	---	---	10.0	20.1	17.9	9.5	2.1	0.1
Fifth child	4.7	*	0.1	---	---	2.7	7.9	8.9	6.4	1.6	0.1
Sixth and seventh child	3.1	*	*	---	---	0.8	3.8	6.4	5.8	2.2	0.1
Eighth child and over	0.9	*	*	---	---	0.1	0.4	1.5	2.5	1.7	0.2
Puerto Rican											
Total	89.9	3.5	110.4	---	---	204.9	106.6	66.7	30.0	6.5	0.3
First child	35.0	3.4	77.0	---	---	78.9	29.7	14.1	5.2	0.8	*
Second child	26.9	*	25.5	---	---	68.1	34.6	20.6	7.8	1.4	*
Third child	16.0	*	6.3	---	---	38.1	23.1	16.6	7.4	1.6	*
Fourth child	7.0	*	1.3	---	---	13.9	11.0	8.4	4.6	1.1	*
Fifth child	2.9	*	0.2	---	---	4.4	4.8	3.7	2.5	0.7	*
Sixth and seventh child	1.7	*	*	---	---	1.5	2.8	2.6	1.7	0.6	*
Eighth child and over	0.4	*	*	---	---	*	0.5	0.8	0.9	0.3	*
Cuban											
Total	50.3	1.0	26.3	---	---	51.6	98.4	86.2	28.9	4.7	0.0
First child	21.4	1.0	21.3	---	---	30.2	43.8	24.5	6.2	0.8	*
Second child	17.8	*	4.3	---	---	15.8	36.1	35.7	10.8	1.8	*
Third child	7.7	*	0.7	---	---	4.2	13.3	18.3	7.8	1.0	*
Fourth child	2.2	*	*	---	---	1.1	3.7	5.0	2.7	0.5	*
Fifth child	0.7	*	*	---	---	*	0.9	1.7	0.8	*	*
Sixth and seventh child	0.4	*	*	---	---	*	0.5	0.8	*	*	*
Eighth child and over	*	*	*	---	---	*	*	*	*	*	*
Other Hispanic ²											
Total	107.0	2.5	112.1	---	---	172.9	157.8	106.6	50.3	12.5	0.5
First child	41.7	2.3	84.4	---	---	81.2	51.5	24.5	9.0	1.9	*
Second child	33.0	0.1	22.7	---	---	58.2	54.2	33.8	13.5	2.7	*
Third child	19.0	*	4.3	---	---	23.4	32.7	26.8	12.8	2.8	*
Fourth child	8.0	*	0.5	---	---	7.6	12.8	12.6	7.6	2.1	*
Fifth child	3.0	*	*	---	---	1.8	4.4	5.1	3.7	1.1	*
Sixth and seventh child	1.8	*	*	---	---	0.6	2.0	3.1	2.8	1.2	*
Eighth child and over	0.4	*	*	---	---	*	0.2	0.6	0.9	0.6	*

See footnotes at end of table.

Table 7. Estimated birth rates by age of mother, live-birth order, Hispanic origin of mother, and by race of mother for mothers of non-Hispanic origin: United States, 1992—Con.

[Live-birth order refers to number of children born alive to mother]

Live-birth order and origin of mother	Age of mother										
	15–44 years ¹										
	15–19 years										
	15–44 years ¹	10–14 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
Non-Hispanic ³											
Total ⁴	64.4	1.2	54.4	33.2	85.5	104.7	112.7	78.4	31.2	5.4	0.2
First child	26.3	1.2	40.6	28.2	59.0	49.5	43.0	21.7	7.0	1.1	0.0
Second child	21.3	0.0	10.8	4.4	20.3	34.8	40.1	29.0	10.2	1.5	0.0
Third child	10.4	0.0	2.4	0.6	5.1	14.2	19.0	16.7	7.2	1.1	0.0
Fourth child	3.9	*	0.4	0.1	1.0	4.5	6.8	6.6	3.5	0.7	0.0
Fifth child	1.4	*	0.1	0.0	0.1	1.3	2.3	2.4	1.6	0.4	0.0
Sixth and seventh child	0.8	*	0.0	*	0.0	0.4	1.2	1.5	1.2	0.4	0.0
Eighth child and over	0.3	*	*	*	*	0.0	0.2	0.4	0.6	0.3	0.0
White	60.2	0.5	41.7	22.7	69.8	93.9	111.5	78.7	30.5	5.1	0.2
First child	25.2	0.4	33.4	20.5	52.6	48.0	44.7	22.5	7.2	1.1	0.0
Second child	20.5	0.0	7.1	2.1	14.5	31.7	41.0	30.0	10.3	1.5	0.0
Third child	9.5	*	1.1	0.2	2.4	10.8	18.0	16.9	7.1	1.0	0.0
Fourth child	3.2	*	0.1	0.0	0.3	2.6	5.6	6.1	3.3	0.6	0.0
Fifth child	1.0	*	0.0	*	0.0	0.5	1.5	2.0	1.3	0.3	0.0
Sixth and seventh child	0.5	*	*	*	*	0.1	0.6	1.1	0.9	0.3	0.0
Eighth child and over	0.2	*	*	*	*	0.0	0.1	0.2	0.4	0.2	0.0
Black	85.5	4.8	116.0	83.9	162.9	163.0	114.6	69.1	29.4	5.7	0.2
First child	31.4	4.7	76.5	65.8	92.2	58.0	29.4	13.5	4.4	0.8	0.0
Second child	25.0	0.2	28.7	15.3	48.2	52.6	36.1	20.6	7.5	1.1	0.0
Third child	15.4	*	8.7	2.5	17.8	31.4	25.1	16.2	6.8	1.2	0.0
Fourth child	7.4	*	1.8	0.3	4.0	13.8	12.8	9.2	4.5	0.9	0.0
Fifth child	3.4	*	0.3	0.0	0.6	5.1	6.2	4.7	2.6	0.7	*
Sixth and seventh child	2.2	*	0.0	*	0.1	1.9	4.1	3.7	2.4	0.6	0.0
Eighth child and over	0.7	*	*	*	*	0.1	0.8	1.3	1.1	0.4	0.0

¹Rates computed by relating total births, regardless of age of mother, to women aged 15–44 years.²Includes Central and South American and other and unknown Hispanic.³Includes origin not stated.⁴Includes races other than white and black.

NOTES: Rates for Hispanic women based on birth data for 49 reporting States and the District of Columbia. Births for New Hampshire, which did not require reporting of Hispanic origin of mother, and births with origin not stated are included in the rates for non-Hispanic women. See Technical notes.

Table 8. Live births by race of mother, birth rates, and fertility rates: United States and each State, 1992

[By place of residence. Birth rates per 1,000 estimated population in each area; fertility rates per 1,000 women aged 15–44 years estimated in each area]

State	Number					Birth rate	Fertility rate
	All races	White	Black	American Indian ¹	Asian or Pacific Islander		
United States	4,065,014	3,201,678	673,633	39,453	150,250	15.9	68.9
Alabama	62,260	40,180	21,522	80	478	15.0	64.8
Alaska	11,726	7,934	542	2,697	553	20.0	82.0
Arizona	68,829	59,432	2,448	5,911	1,038	18.0	80.4
Arkansas	34,820	26,289	8,152	162	217	14.5	66.2
California	601,730	492,487	46,509	3,215	59,519	19.5	83.1
Colorado	54,535	49,644	3,008	585	1,298	15.7	65.0
Connecticut	47,573	40,278	6,145	121	1,029	14.5	63.2
Delaware	10,656	7,901	2,553	29	173	15.4	65.2
District of Columbia	10,960	1,607	8,803	8	542	18.7	71.2
Florida	191,713	143,463	44,970	428	2,852	14.2	68.0
Georgia	111,116	68,819	40,382	89	1,826	16.4	66.9
Hawaii	19,864	5,738	685	183	13,258	17.2	75.2
Idaho	17,362	16,834	58	260	210	16.3	73.5
Illinois	191,396	142,842	42,923	264	5,367	16.5	71.4
Indiana	84,140	73,914	9,426	102	698	14.9	64.0
Iowa	38,469	36,567	1,184	162	556	13.7	63.2
Kansas	38,027	33,674	3,314	331	708	15.1	68.2
Kentucky	53,840	48,227	5,188	59	366	14.3	61.5
Louisiana	70,707	39,757	29,841	241	868	16.5	69.8
Maine	16,057	15,762	82	71	142	13.0	56.3
Maryland	77,815	49,619	25,426	135	2,635	15.8	65.3
Massachusetts	87,231	75,141	8,647	146	3,297	14.6	60.8
Michigan	144,089	112,169	29,742	755	1,423	15.3	65.2
Minnesota	65,607	59,187	2,916	1,239	2,265	14.7	63.7
Mississippi	42,681	21,704	20,524	187	266	16.3	70.2
Missouri	76,301	61,908	13,315	212	866	14.7	65.5
Montana	11,472	9,981	49	1,354	88	14.0	63.6
Nebraska	23,397	21,403	1,312	385	297	14.6	66.0
Nevada	22,374	18,962	2,163	380	869	16.7	73.6
New Hampshire	15,990	15,714	109	17	150	14.3	59.5
New Jersey	119,909	90,823	23,406	296	5,384	15.3	66.8
New Mexico	27,922	23,159	513	3,955	295	17.7	77.0
New York	287,887	212,579	60,990	1,066	13,252	15.9	68.1
North Carolina	103,967	70,772	30,333	1,549	1,313	15.2	64.7
North Dakota	8,811	7,831	75	810	95	13.9	63.6
Ohio	162,247	134,344	25,994	202	1,707	14.7	63.9
Oklahoma	47,557	37,305	5,164	4,410	678	14.8	66.5
Oregon	42,035	39,068	955	670	1,342	14.1	62.7
Pennsylvania	164,625	135,996	25,405	241	2,983	13.7	61.6
Rhode Island	14,500	12,673	1,186	123	518	14.5	62.5
South Carolina	56,192	33,977	21,604	81	530	15.6	65.5
South Dakota	11,018	9,110	79	1,749	80	15.6	73.0
Tennessee	73,614	55,279	17,510	116	709	14.6	62.5
Texas	320,845	270,198	43,016	678	6,953	18.1	76.1
Utah	37,200	35,317	245	748	890	20.5	88.5
Vermont	7,737	7,629	34	9	65	13.5	56.6
Virginia	97,198	70,137	23,854	125	3,082	15.2	62.6
Washington	79,450	70,081	3,145	1,662	4,562	15.4	66.1
West Virginia	22,170	21,248	815	9	98	12.3	54.6
Wisconsin	70,670	60,689	7,307	878	1,796	14.2	62.4
Wyoming	6,723	6,326	65	268	64	14.5	62.9

¹Includes births to Aleuts and Eskimos.

Table 9. Live births by Hispanic origin of mother and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia and each State, 1992

[By place of residence.]

State	All origins	Origin of mother								Total ¹	White	Black	Not stated
		Hispanic						Non-Hispanic					
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic						
All reporting States	4,049,024	643,271	432,047	59,569	11,472	89,031	51,152	3,365,862	2,527,207	657,450	39,891		
Alabama	62,260	444	260	86	10	48	40	61,801	39,774	21,488	15		
Alaska	11,726	373	197	38	8	48	82	11,338	7,590	531	15		
Arizona	68,829	21,862	21,017	164	31	369	281	46,907	37,790	2,399	60		
Arkansas	34,820	472	381	22	6	28	35	34,336	25,828	8,133	12		
California	601,730	263,525	222,060	2,110	850	30,241	8,264	334,523	228,252	45,510	3,682		
Colorado	54,535	10,303	5,375	148	25	181	4,574	44,201	39,512	2,919	31		
Connecticut	47,573	5,476	167	3,824	63	753	669	39,607	33,228	5,349	2,490		
Delaware	10,656	426	173	189	3	34	27	10,204	7,504	2,502	26		
District of Columbia	10,960	893	68	8	7	767	43	10,025	1,319	8,521	42		
Florida	191,713	29,367	5,318	4,793	7,555	9,580	2,121	162,220	115,131	43,954	126		
Georgia	111,116	2,932	1,876	280	98	441	237	107,967	65,794	40,279	217		
Hawaii	19,864	2,241	361	658	12	52	1,158	17,618	5,084	654	5		
Idaho	17,362	1,758	1,421	14	2	38	283	15,566	15,065	55	38		
Illinois	191,396	27,333	21,015	3,260	210	1,068	1,780	163,601	115,760	42,346	462		
Indiana	84,140	1,941	1,422	266	13	75	165	82,109	71,956	9,392	90		
Iowa	38,469	853	496	18	4	47	288	37,586	35,724	1,167	30		
Kansas	38,027	2,311	1,939	69	8	99	196	35,584	31,283	3,287	132		
Kentucky	53,840	372	188	61	12	19	92	53,403	47,840	5,167	65		
Louisiana	70,707	977	259	54	63	469	132	69,719	38,900	29,751	11		
Maine	16,057	101	31	13	3	3	51	15,313	15,033	75	643		
Maryland	77,815	2,980	1,547	164	47	1,023	199	73,582	46,492	24,549	1,253		
Massachusetts	87,231	8,522	257	4,717	114	3,171	263	78,132	67,564	7,141	577		
Michigan	144,089	4,302	2,701	410	65	183	943	134,557	102,987	29,463	5,230		
Minnesota	65,607	1,377	935	77	9	81	275	57,143	52,515	2,132	7,087		
Mississippi	42,681	141	61	14	1	13	52	42,522	21,554	20,515	18		
Missouri	76,301	1,018	726	70	24	95	103	75,228	60,901	13,282	55		
Montana	11,472	189	138	3	3	3	42	10,879	9,458	36	404		
Nebraska	23,397	1,105	878	11	4	40	172	21,993	20,013	1,306	299		
Nevada	22,374	4,116	3,262	95	90	389	280	18,220	14,901	2,127	38		
New Jersey	119,909	17,609	1,420	8,432	944	5,805	1,008	101,978	74,348	22,103	322		
New Mexico	27,922	12,957	3,386	33	55	64	9,419	14,964	10,331	489	1		
New York	287,887	53,047	4,907	21,230	587	23,201	3,122	223,723	154,439	55,549	11,117		
North Carolina	103,967	2,379	1,452	357	40	383	147	101,559	68,482	30,262	29		
North Dakota	8,811	119	58	6	1	6	48	8,630	7,657	73	62		
Ohio	162,247	2,583	1,127	1,008	42	137	269	159,455	131,703	25,880	209		
Oklahoma	47,557	2,045	1,436	85	12	42	470	45,443	35,320	5,124	69		
Oregon	42,035	3,561	3,209	47	15	173	117	38,453	35,577	943	21		
Pennsylvania	164,625	5,949	502	4,016	77	529	825	158,425	130,265	24,987	251		
Rhode Island	14,500	1,553	66	524	11	842	110	12,029	10,408	1,017	918		
South Carolina	56,192	625	290	110	16	14	195	55,495	33,379	21,535	72		
South Dakota	11,018	109	94	3	—	6	6	10,894	9,008	74	15		
Tennessee	73,614	595	323	104	12	63	93	73,000	54,700	17,490	19		
Texas	320,845	126,357	109,730	797	206	5,600	10,024	194,214	143,915	42,786	274		
Utah	37,200	2,282	1,461	64	15	304	438	34,867	33,062	208	51		
Vermont	7,737	30	14	8	2	1	5	6,775	6,672	32	932		
Virginia	97,198	3,890	691	438	60	2,275	426	93,225	66,370	23,737	83		
Washington	79,450	7,182	5,475	184	21	126	1,376	70,056	61,224	2,993	2,212		
West Virginia	22,170	75	37	10	2	5	21	22,090	21,185	812	5		
Wisconsin	70,670	2,132	1,455	471	14	86	106	68,468	58,558	7,265	70		
Wyoming	6,723	482	385	6	—	11	80	6,235	5,852	61	6		

¹Includes races other than white and black.

NOTE: Excludes data for New Hampshire, which did not require reporting Hispanic origin of mother.

Table 10. Total number of births, rates, and percent of births with selected demographic characteristics, by specified race of mother: United States, 1992

Characteristic	All races	White	Black	American Indian ¹	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
Number										
Births	4,065,014	3,201,678	673,633	39,453	150,250	25,061	9,098	5,883	28,959	81,249
Rate										
Birth rate ²	15.9	15.0	21.3	18.4	18.0	---	---	---	---	---
Fertility rate ³	68.9	66.5	83.2	75.4	67.2	---	---	---	---	---
Total fertility rate ⁴	2,065.0	1,993.5	2,442.0	2,190.0	1,942.0	---	---	---	---	---
Sex ratio ⁵	1,050	1,053	1,036	1,034	1,065	1,065	1,049	1,064	1,083	1,062
Percent										
Births to mothers under 20 years.	12.7	10.9	22.7	20.0	5.6	1.0	2.6	18.4	5.6	6.4
Fourth- and higher-order births	10.8	9.6	16.0	22.4	10.4	3.2	3.8	15.4	7.2	14.2
Interval since last live birth of less than 18 months ⁶	13.2	11.7	19.6	19.6	15.0	10.3	6.9	18.7	11.7	17.8
Births to unmarried mothers	30.1	22.6	68.1	55.3	14.7	6.1	9.8	45.7	16.8	14.9
Mothers completing 12 years or more of school	76.4	77.7	70.0	64.1	81.0	84.8	97.6	81.4	90.7	74.3
Mothers born in the United States	83.0	84.2	91.8	95.9	14.8	9.1	49.1	97.5	14.3	6.8

¹Includes births to Aleuts and Eskimos.²Rate per 1,000 population.³Rate per 1,000 women aged 15–44 years.⁴Rates are sums of birth rates for 5-year age groups multiplied by 5.⁵Male live births per 1,000 female live births.⁶Refers only to second- and higher-order births.

Table 11. Total number of births, rates, and percent of births with selected demographic characteristics, by Hispanic origin of mother and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 1992

Characteristic	Origin of mother									
	All origins ¹	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Births	4,049,024	643,271	432,047	59,569	11,472	89,031	51,152	3,365,862	2,527,207	657,450
Rate ³										
Birth rate ⁴	15.9	26.5	27.8	23.2	10.1	27.9		14.8	13.5	21.9
Fertility rate ⁵	68.9	108.6	116.0	89.9	50.3	107.0		64.4	60.2	85.5
Total fertility rate ⁶	2,065.0	3,043.0	3,196.5	2,644.5	1,485.5	3,076.0		1,941.0	1,810.5	2,514.0
Sex ratio ⁷	1,050	1,041	1,040	1,057	1,079	1,040	1,030	1,052	1,056	1,036
Percent										
Births to mothers under 20 years.	12.8	17.1	18.0	21.4	7.1	9.6	20.0	12.0	9.4	22.9
Fourth- and higher-order births	10.8	15.2	16.6	13.3	6.6	12.5	12.1	10.0	8.2	16.0
Interval since last live birth of less than 18 months ⁸	13.3	15.8	16.2	17.9	10.6	12.9	15.9	12.8	10.6	19.7
Births to unmarried mothers	30.2	39.1	36.3	57.5	20.2	43.9	37.6	28.5	18.5	68.3
Mothers completing 12 years or more of school. .	76.4	45.9	38.7	59.0	84.4	56.4	65.3	82.1	85.5	70.2
Mothers born in the United States	82.9	37.5	36.4	58.9	27.7	5.6	80.2	91.6	95.6	93.0

¹Includes origin not stated.²Includes races other than white and black.³Birth, fertility, and total fertility rates by Hispanic origin are estimated for the United States. Rates for Hispanic women are based on birth data for 49 reporting States and the District of Columbia. Births for New Hampshire, which did not require reporting of Hispanic origin, and births with origin not stated are included in the rates for non-Hispanic women. See Technical notes.⁴Rate per 1,000 population.⁵Rate per 1,000 women aged 15–44 years.⁶Rates are sums of birth rates for 5-year age groups multiplied by 5.⁷Male live births per 1,000 female live births.⁸Refers only to second- and higher-order births.**Table 12. Live births by race of mother and observed and seasonally adjusted birth and fertility rates, by month: United States, 1992**

[Rates on an annual basis per 1,000 population for specified month. Birth rates based on the total population. Fertility rates based on women aged 15–44 years]

Month	Number			Observed		Seasonally adjusted ¹	
	All races ²	White	Black	Birth rate	Fertility rate	Birth rate	Fertility rate
Total	4,065,014	3,201,678	673,633	15.9	68.9	...	...
January	334,045	260,383	57,934	15.5	66.8	16.3	70.0
February	315,448	247,679	52,932	15.7	67.5	16.1	69.1
March	339,518	269,301	54,687	15.8	67.9	16.0	69.0
April	333,373	266,064	51,880	16.0	68.9	16.2	69.8
May	344,137	273,894	54,302	16.0	68.9	16.0	69.2
June	339,664	269,004	54,988	16.3	70.2	16.0	69.0
July	359,112	283,028	59,917	16.6	71.8	16.0	69.0
August	348,949	274,646	58,254	16.1	69.8	15.3	66.2
September	347,547	273,412	57,821	16.6	71.8	15.8	68.2
October	343,546	269,701	57,537	15.8	68.7	15.9	68.8
November	321,943	251,225	55,233	15.3	66.5	15.8	68.7
December	337,732	263,341	58,148	15.6	67.5	16.0	69.6

¹The method of seasonal adjustment, developed by the U.S. Bureau of the Census, is described in The X–11 Variant of the Census Method II Seasonal Adjustment Program, Technical Paper No. 15 (1967 revision).²Includes races other than white and black.

Table 13. Live births by day of week and index of occurrence by method of delivery, day of week, and race of mother: United States, 1992

Day of week and race of mother	Average number of births	Index of occurrence ¹				
		Method of delivery				
		Total ²	Vaginal	Cesarean		
				Total	Primary	Repeat
All races ³	11,107	100.0	100.0	100.0	100.0	100.0
Sunday	8,754	78.8	84.9	58.0	69.0	39.9
Monday	11,398	102.6	101.0	108.3	99.7	122.5
Tuesday	12,333	111.0	108.5	120.0	116.1	126.4
Wednesday	11,957	107.7	105.8	114.1	111.7	118.0
Thursday	11,895	107.1	105.3	113.2	110.2	118.2
Friday	11,957	107.7	104.5	118.4	112.8	127.8
Saturday	9,420	84.8	89.9	67.4	80.0	46.5
White	8,748	100.0	100.0	100.0	100.0	100.0
Sunday	6,722	76.8	83.1	55.7	67.1	37.2
Monday	9,030	103.2	101.5	109.3	100.1	124.2
Tuesday	9,804	112.1	109.4	121.1	117.1	127.6
Wednesday	9,475	108.3	106.5	114.5	112.2	118.2
Thursday	9,429	107.8	105.9	113.9	110.8	118.9
Friday	9,467	108.2	104.8	119.8	113.7	129.7
Saturday	7,280	83.2	88.5	65.2	78.6	43.4
Black	1,841	100.0	100.0	100.0	100.0	100.0
Sunday	1,588	86.3	91.7	67.4	76.5	51.5
Monday	1,837	99.8	98.6	104.0	97.9	114.6
Tuesday	1,978	107.5	105.2	115.6	112.2	121.5
Wednesday	1,940	105.4	103.1	113.2	110.2	118.5
Thursday	1,925	104.6	102.8	110.6	108.5	114.4
Friday	1,940	105.4	103.4	112.2	108.7	118.3
Saturday	1,673	90.9	95.1	76.5	85.6	60.6

¹Index is the ratio of the average number of births by a specified method of delivery on a given day of the week to the average daily number of births by a specified method of delivery for the year, multiplied by 100.

²Includes method of delivery not stated.

³Includes races other than white and black.

Table 14. Number, rate, and ratio of births to unmarried women by age and race of mother: United States, 1992

Age of mother	Number			Rate per 1,000 unmarried women in specified group			Ratio per 1,000 live births		
	All races ¹	White	Black	All races ¹	White	Black	All races ¹	White	Black
All ages	1,224,876	721,986	458,969	² 45.2	² 35.2	² 86.5	301.3	225.5	681.3
Under 15 years.	11,161	4,553	6,296	---	---	---	913.3	848.3	976.4
15–19 years.	353,878	206,830	135,994	44.6	33.0	105.9	700.2	603.5	926.4
15 years	25,459	12,664	12,059	30.4	21.6	78.0	869.9	793.2	970.0
16 years	49,021	27,323	20,158				815.2	733.4	961.3
17 years	74,103	43,861	27,985				755.0	669.0	945.4
18 years	96,009	57,566	35,422				692.4	600.0	923.4
19 years	109,286	65,416	40,370	67.3	51.5	147.8	609.8	511.0	888.5
20–24 years.	435,727	258,268	162,561	68.5	52.7	144.3	407.0	317.1	752.4
25–29 years.	233,467	137,639	86,853	56.5	45.4	98.2	198.0	142.7	549.8
30–34 years.	127,982	75,696	46,860	37.9	31.5	57.7	143.0	101.5	467.0
35–39 years.	52,447	32,218	17,608	18.8	16.2	25.8	152.2	114.0	447.0
40 years and over	10,214	6,782	2,797	³ 4.1	³ 3.6	³ 5.4	177.0	146.0	421.2

¹Includes races other than white and black.²Rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.³Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.

NOTE: For 44 States and the District of Columbia, marital status of mother is reported on the birth certificate; for 6 States, mother's marital status is inferred; see Technical notes.

Table 15. Birth rates for unmarried women by age of mother and race: United States, 1970, 1975, and 1980–92

[Rates are live births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1]

Year and race	Age of mother								
	15–44 years ¹	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years ²
		Total	15–17 years	18–19 years					
All races ³									
1992 ⁴	45.2	44.6	30.4	67.3	68.5	56.5	37.9	18.8	4.1
1991 ⁴	45.2	44.8	30.9	65.7	68.0	56.5	38.1	18.0	3.8
1990 ⁴	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6
1989 ⁴	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4
1988 ⁴	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2
1987 ⁴	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9
1986 ⁴	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7
1985 ⁴	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5
1984 ^{4,5}	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5
1983 ^{4,5}	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6
1982 ^{4,5}	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7
1981 ^{4,5}	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6
1980 ^{4,5}	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6
1980 ^{5,6}	28.4	27.5	20.7	38.7	39.7	31.4	18.5	8.4	2.3
1975 ^{5,6}	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6
1970 ^{6,7}	26.4	22.4	17.1	32.9	38.4	37.0	27.1	13.6	3.5
White									
Race of mother:									
1992 ⁴	35.2	33.0	21.6	51.5	52.7	45.4	31.5	16.2	3.6
1991 ⁴	34.6	32.8	21.8	49.6	51.5	44.6	31.1	15.2	3.2
1990 ⁴	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2
1989 ⁴	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9
1988 ⁴	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7
1987 ⁴	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4
1986 ⁴	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2
1985 ⁴	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0
1984 ^{4,5}	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0
1983 ^{4,5}	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0
1982 ^{4,5}	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1
1981 ^{4,5}	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9
1980 ^{4,5}	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8
Race of child:									
1980 ^{5,6}	16.2	15.9	11.7	22.8	22.4	17.3	10.5	5.3	1.4
1975 ^{5,6}	12.4	12.0	9.6	16.5	15.5	14.8	9.8	5.4	1.5
1970 ^{6,7}	13.9	10.9	7.5	17.6	22.5	21.1	14.2	7.6	2.0

See footnotes at end of table.

Table 15. Birth rates for unmarried women by age of mother and race: United States, 1970, 1975, and 1980–92—Con.

[Rates are live births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1]

Year and race	Age of mother								
	15–19 years								
	15–44 years ¹	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years ²
Black									
Race of mother:									
1992 ⁴	86.5	105.9	78.0	147.8	144.3	98.2	57.7	25.8	5.4
1991 ⁴	89.5	108.5	80.4	148.7	147.5	100.9	60.1	25.6	5.4
1990 ⁴	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1
1989 ⁴	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0
1988 ⁴	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0
1987 ⁴	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7
1986 ⁴	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4
1985 ⁴	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3
1984 ^{4,5}	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3
1983 ^{4,5}	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8
1982 ^{4,5}	77.9	85.1	66.3	112.7	109.3	82.7	44.1	19.5	5.2
1981 ^{4,5}	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6
1980 ^{4,5}	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5
Race of child:									
1980 ^{5,6}	83.2	90.3	70.6	121.8	116.0	82.9	47.0	18.5	5.5
1975 ^{5,6}	84.2	93.5	76.8	123.8	108.0	75.7	50.0	20.5	7.2
1970 ^{6,7}	95.5	96.9	77.9	136.4	131.5	100.9	71.8	32.9	10.4

¹Rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.²Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.³Includes races other than white and black.⁴Data for States in which marital status was not reported have been inferred and included with data from the remaining States; see Technical notes.⁵Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.⁶Births to unmarried women are estimated for the United States from data for registration areas in which marital status of mother was reported; see Technical notes.⁷Based on a 50-percent sample of births.

Table 16. Number and percent of births to unmarried women and number and percent of births of low birthweight, by race of mother: United States and each State, 1992

[By place of residence]

State	Births to unmarried women ¹						Low birthweight ²					
	Number			Percent			Number			Percent		
	All races ³	White	Black	All races ³	White	Black	All races ³	White	Black	All races ³	White	Black
United States	1,224,876	721,986	458,969	30.1	22.6	68.1	287,493	185,662	89,517	7.1	5.8	13.3
Alabama	20,272	5,517	14,680	32.6	13.7	68.2	5,264	2,470	2,763	8.5	6.2	12.8
Alaska	3,215	1,505	191	27.4	19.0	35.2	577	344	58	4.9	4.3	10.7
Arizona	24,939	19,443	1,598	36.2	32.7	65.3	4,419	3,684	306	6.4	6.2	12.5
Arkansas	10,781	4,886	5,822	31.0	18.6	71.4	2,835	1,720	1,095	8.2	6.5	13.5
California	206,396	167,651	29,226	34.3	34.0	62.8	35,704	25,890	5,880	5.9	5.3	12.6
Colorado	12,971	10,801	1,686	23.8	21.8	56.1	4,632	3,964	509	8.5	8.0	16.9
Connecticut	13,657	8,934	4,347	28.7	22.2	70.7	3,264	2,324	857	6.9	5.8	14.0
Delaware	3,470	1,593	1,853	32.6	20.2	72.6	806	459	333	7.6	5.8	13.1
District of Columbia	7,334	244	6,828	66.9	15.2	77.6	1,556	73	1,438	14.3	4.6	16.4
Florida	65,491	33,993	30,963	34.2	23.7	68.9	14,239	8,596	5,408	7.4	6.0	12.0
Georgia	38,925	11,607	27,103	35.0	16.9	67.1	9,490	4,105	5,267	8.5	6.0	13.1
Hawaii	5,204	888	133	26.2	15.5	19.4	1,430	309	73	7.2	5.4	10.7
Idaho	3,179	3,016	21	18.3	17.9	36.2	955	922	5	5.5	5.5	*
Illinois	63,979	29,544	33,993	33.4	20.7	79.2	14,772	8,114	6,258	7.7	5.7	14.6
Indiana	24,786	17,461	7,237	29.5	23.6	76.8	5,635	4,422	1,165	6.7	6.0	12.4
Iowa	9,058	7,990	889	23.5	21.9	75.1	2,200	1,989	152	5.7	5.4	12.9
Kansas	9,224	6,789	2,180	24.3	20.2	65.8	2,451	2,007	383	6.4	6.0	11.6
Kentucky	14,181	10,455	3,659	26.3	21.7	70.5	3,681	3,050	611	6.8	6.3	11.8
Louisiana	28,452	7,350	20,899	40.2	18.5	70.0	6,620	2,477	4,080	9.4	6.2	13.7
Maine	4,063	3,980	30	25.3	25.3	36.6	808	793	5	5.0	5.0	*
Maryland	23,717	8,089	15,303	30.5	16.3	60.2	6,432	2,799	3,464	8.3	5.7	13.7
Massachusetts	22,618	16,368	5,446	25.9	21.8	63.0	5,185	4,019	940	6.0	5.4	10.9
Michigan	38,620	16,838	21,431	26.8	15.0	72.1	10,780	6,257	4,393	7.5	5.6	14.8
Minnesota	15,058	11,451	2,170	23.0	19.3	74.4	3,408	2,867	333	5.2	4.8	11.4
Mississippi	18,312	3,291	14,872	42.9	15.2	72.5	4,221	1,473	2,705	9.9	6.8	13.2
Missouri	24,049	13,340	10,474	31.5	21.5	78.7	5,587	3,701	1,811	7.3	6.0	13.6
Montana	3,032	2,076	17	26.4	20.8	*	688	600	5	6.0	6.0	*
Nebraska	5,290	4,019	954	22.6	18.8	72.7	1,315	1,124	155	5.6	5.3	11.8
Nevada	7,449	5,462	1,555	33.3	28.8	71.9	1,599	1,218	298	7.1	6.4	13.8
New Hampshire	3,068	3,000	54	19.2	19.1	49.5	841	821	9	5.3	5.2	*
New Jersey	31,631	15,821	15,385	26.4	17.4	65.7	8,664	5,136	3,143	7.2	5.7	13.5
New Mexico	11,023	8,003	298	39.5	34.6	58.1	2,013	1,696	68	7.2	7.3	13.3
New York	100,260	56,641	41,360	34.8	26.6	67.8	21,841	12,924	7,973	7.6	6.1	13.1
North Carolina	32,547	11,394	20,262	31.3	16.1	66.8	8,737	4,499	4,015	8.4	6.4	13.2
North Dakota	1,995	1,425	15	22.6	18.2	*	448	390	10	5.1	5.0	*
Ohio	51,317	31,024	20,051	31.6	23.1	77.1	11,920	8,190	3,600	7.4	6.1	13.9
Oklahoma	13,486	8,025	3,532	28.4	21.5	68.4	3,175	2,252	634	6.7	6.1	12.4
Oregon	11,343	10,059	676	27.0	25.7	70.8	2,175	1,938	104	5.2	5.0	10.9
Pennsylvania	51,959	31,183	20,181	31.6	22.9	79.4	11,799	7,897	3,689	7.2	5.8	14.5
Rhode Island	4,298	3,256	797	29.6	25.7	67.2	897	738	109	6.3	5.9	9.3
South Carolina	19,934	5,693	14,173	35.5	16.8	65.6	5,066	2,146	2,879	9.0	6.3	13.3
South Dakota	2,933	1,652	26	26.6	18.1	32.9	573	462	7	5.2	5.1	*
Tennessee	24,061	11,088	12,829	32.7	20.1	73.3	6,241	3,722	2,451	8.5	6.7	14.0
Texas	55,994	35,324	20,032	17.5	13.1	46.6	22,388	16,277	5,583	7.0	6.0	13.0
Utah	5,634	5,004	127	15.1	14.2	51.8	2,085	1,964	22	5.6	5.6	9.0
Vermont	1,811	1,774	13	23.4	23.3	*	431	422	6	5.6	5.5	*
Virginia	27,538	11,924	15,237	28.3	17.0	63.9	7,158	3,968	3,000	7.4	5.7	12.6
Washington	20,116	16,448	1,740	25.3	23.5	55.3	4,205	3,458	373	5.3	4.9	11.9
West Virginia	6,149	5,559	581	27.7	26.2	71.3	1,599	1,489	101	7.2	7.0	12.4
Wisconsin	18,444	11,685	6,007	26.1	19.3	82.2	4,193	3,046	982	5.9	5.0	13.4
Wyoming	1,613	1,423	33	24.0	22.5	50.8	491	457	9	7.3	7.2	*

¹For 44 States and the District of Columbia, marital status of mother is reported on the birth certificate; for 6 States, mother's marital status is inferred; see Technical notes.²Less than 2,500 grams (5 lb 8 oz).³Includes races other than white and black.

Table 17. Birth rates by age and race of father: United States, 1980–92

[Rates are live births per 1,000 men in specified group, enumerated as of April 1 for 1980 and 1990 and estimated as of July 1 for all other years. Figures for age of father not stated are distributed]

Year and race of father	Age of father									
	15–54 years ¹	15–19 years ²	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
All races³										
1992	55.8	24.6	87.7	113.1	94.2	51.3	20.4	7.3	2.7	0.4
1991	57.1	24.8	88.0	114.7	95.1	51.8	20.2	7.5	2.7	0.4
1990	58.4	23.5	88.0	116.4	97.8	53.0	21.0	7.5	2.8	0.4
1989	57.2	21.9	85.4	114.3	94.8	51.4	20.4	7.4	2.7	0.6
1988	55.8	19.6	82.4	111.6	93.2	49.9	19.9	7.1	2.7	0.4
1987	55.0	18.3	80.5	109.9	91.2	48.6	19.0	6.9	2.6	0.4
1986	54.8	17.9	80.3	109.6	90.3	46.8	18.3	6.7	2.6	0.4
1985	55.6	18.0	81.2	112.3	91.1	47.3	18.1	6.6	2.5	0.4
1984 ⁴	55.0	17.8	80.7	111.4	89.9	46.0	17.8	6.3	2.4	0.4
1983 ⁴	55.1	18.2	82.6	113.0	89.1	45.2	17.4	6.4	2.3	0.4
1982 ⁴	56.4	18.6	86.5	117.3	90.3	44.5	17.5	6.4	2.3	0.4
1981 ⁴	56.3	18.4	88.4	119.1	88.7	43.3	17.0	6.2	2.3	0.4
1980 ⁴	57.0	18.8	92.0	123.1	91.0	42.8	17.1	6.1	2.2	0.3
White										
1992	52.2	18.9	78.2	110.1	93.2	49.3	18.8	6.4	2.2	0.3
1991	53.3	19.1	78.4	111.5	93.6	49.7	18.5	6.5	2.2	0.3
1990	54.6	18.1	78.3	113.2	96.1	50.9	19.2	6.5	2.2	0.3
1989	53.3	16.7	75.9	110.8	93.0	49.1	18.7	6.3	2.1	0.4
1988	52.2	14.8	73.7	108.3	91.2	47.6	18.1	6.1	2.1	0.3
1987	51.6	13.9	72.8	107.0	89.5	46.2	17.3	5.9	2.0	0.3
1986	51.7	13.8	73.3	107.0	88.7	44.4	16.6	5.7	2.0	0.3
1985	52.6	14.0	74.7	109.9	89.5	44.8	16.3	5.6	1.9	0.3
1984 ⁴	51.8	14.0	74.3	108.8	87.9	43.5	16.0	5.3	1.9	0.3
1983 ⁴	52.0	14.4	76.3	110.2	86.8	42.6	15.5	5.3	1.8	0.3
1982 ⁴	53.1	14.9	80.1	114.2	87.5	41.7	15.6	5.3	1.9	0.3
1981 ⁴	52.9	15.0	81.7	115.8	85.8	40.3	15.0	5.2	1.8	0.3
1980 ⁴	53.4	15.4	84.9	119.4	87.8	39.7	15.0	5.1	1.8	0.3
Black										
1992	81.0	57.4	158.0	140.1	96.8	56.9	28.4	13.9	6.2	1.4
1991	83.4	58.0	158.5	143.3	100.1	58.8	29.4	14.2	6.7	1.4
1990	84.9	55.2	158.2	144.9	103.2	60.4	31.1	15.0	7.1	1.4
1989	84.1	52.9	153.4	143.5	101.4	59.9	31.1	14.9	6.9	2.7
1988	80.7	48.1	144.1	137.9	100.0	58.0	30.6	14.3	6.9	1.4
1987	78.3	44.6	136.1	133.9	97.4	58.0	30.0	13.8	6.6	1.3
1986	77.2	42.6	131.4	131.6	97.4	58.0	29.1	13.5	6.7	1.3
1985	77.2	41.8	129.5	132.7	97.3	59.4	29.5	13.3	6.5	1.2
1984 ⁴	76.7	40.9	128.0	132.2	98.3	58.4	29.3	13.3	6.1	1.2
1983 ⁴	77.2	40.7	129.1	134.4	99.0	59.6	29.6	13.5	6.0	1.2
1982 ⁴	79.5	40.3	133.4	141.2	103.6	61.1	29.6	13.9	6.0	1.2
1981 ⁴	80.4	38.9	138.4	145.6	104.3	61.3	29.7	13.3	5.7	1.2
1980 ⁴	83.0	40.1	145.3	152.8	109.6	62.0	31.2	13.6	5.9	1.1

¹Rates computed by relating total births, regardless of age of father, to men aged 15–54 years.

²Rates computed by relating births of fathers under 20 years of age to men aged 15–19 years.

³Includes races other than white and black.

⁴Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.

Table 18. Live births by educational attainment of mother, by age and race of mother: United States, 1992

		Years of school completed by mother					
Age and race of mother	Total	0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated
All races ¹							
All ages	4,065,014	259,238	683,287	1,468,019	834,965	754,963	64,542
Under 15 years	12,220	9,234	2,411	—	—	—	575
15–19 years	505,415	52,889	269,593	153,661	20,015	—	9,257
15 years	29,267	10,202	18,115	—	—	—	950
16 years	60,136	9,270	47,992	1,673	—	—	1,201
17 years	98,146	9,388	73,119	13,519	286	—	1,834
18 years	138,663	10,981	68,477	53,445	3,456	—	2,304
19 years	179,203	13,048	61,890	85,024	16,273	—	2,968
20–24 years	1,070,490	70,776	224,399	500,201	214,541	44,440	16,133
25–29 years	1,179,264	59,409	111,472	440,663	298,458	251,936	17,326
30–34 years	895,271	40,765	53,717	269,541	212,971	304,338	13,939
35–39 years	344,644	20,552	18,508	90,258	77,351	131,992	5,983
40 years and over	57,710	5,613	3,187	13,695	11,629	22,257	1,329
White							
All ages	3,201,678	218,804	484,604	1,132,244	666,637	654,504	44,885
Under 15 years	5,367	4,083	1,032	—	—	—	252
15–19 years	342,739	42,053	177,118	104,493	13,281	—	5,794
15 years	15,966	6,005	9,468	—	—	—	493
16 years	37,256	6,811	28,771	999	—	—	675
17 years	65,564	7,919	47,436	8,860	210	—	1,139
18 years	95,949	9,625	46,975	35,667	2,191	—	1,491
19 years	128,004	11,693	44,468	58,967	10,880	—	1,996
20–24 years	814,422	63,254	169,061	373,498	161,673	36,000	10,936
25–29 years	964,586	52,524	84,354	353,897	243,304	218,135	12,372
30–34 years	745,510	35,335	38,285	218,873	176,132	266,682	10,203
35–39 years	282,617	17,147	12,589	71,092	62,938	114,455	4,396
40 years and over	46,437	4,408	2,165	10,391	9,309	19,232	932
Black							
All ages	673,633	23,551	174,010	278,582	132,016	51,202	14,272
Under 15 years	6,448	4,855	1,293	—	—	—	300
15–19 years	146,800	9,204	84,369	44,238	5,997	—	2,992
15 years	12,432	3,939	8,068	—	—	—	425
16 years	20,970	2,210	17,677	616	—	—	467
17 years	29,600	1,208	23,516	4,214	63	—	599
18 years	38,362	988	19,530	16,040	1,104	—	700
19 years	45,436	859	15,578	23,368	4,830	—	801
20–24 years	216,057	3,433	48,231	109,942	44,675	5,852	3,924
25–29 years	157,960	2,511	22,396	69,549	42,708	17,367	3,429
30–34 years	100,339	1,976	12,333	38,395	27,103	18,056	2,476
35–39 years	39,389	1,255	4,635	14,088	9,973	8,482	956
40 years and over	6,640	317	753	2,370	1,560	1,445	195

¹Includes races other than white and black.

Table 19. Number of live births and percent distribution by weight gain during pregnancy and median weight gain, according to period of gestation and race of mother: Total of 49 reporting States and the District of Columbia, 1992

<i>Period of gestation¹ and race of mother</i>	<i>Weight gain during pregnancy</i>										<i>Median weight gain</i>
	<i>All births</i>	<i>Less than 16 pounds</i>	<i>16–20 pounds</i>	<i>21–25 pounds</i>	<i>26–30 pounds</i>	<i>31–35 pounds</i>	<i>36–40 pounds</i>	<i>41–45 pounds</i>	<i>46 pounds or more</i>	<i>Not stated</i>	
All gestational periods ²											Pounds
All races ³	3,463,284	295,378	325,628	453,707	607,884	450,797	391,305	200,164	317,914	420,507	...
White.	2,709,191	200,993	238,228	357,654	493,891	376,647	323,416	166,779	255,873	295,710	...
Black.	627,124	82,256	73,432	78,217	91,633	58,797	55,348	27,561	53,681	106,199	...
Under 37 weeks											
All races ³	373,834	54,485	47,417	49,564	55,592	35,779	30,153	14,894	25,952	59,998	...
White.	245,207	29,881	29,414	34,020	39,125	26,595	22,086	11,132	18,773	34,181	...
Black.	115,404	22,643	16,224	13,750	14,482	7,919	7,177	3,333	6,544	23,332	...
37–39 weeks											
All races ³	1,457,420	121,493	141,394	201,480	266,331	192,680	162,897	81,021	123,053	167,071	...
White.	1,134,983	83,292	103,522	157,899	215,045	159,648	133,071	66,693	97,766	118,047	...
Black.	264,706	32,882	31,238	35,022	40,624	25,892	24,183	11,845	21,923	41,097	...
40 weeks and over											
All races ³	1,614,087	118,373	136,025	201,781	284,761	221,560	197,578	103,937	168,363	181,709	...
White.	1,317,169	87,182	104,788	165,132	238,784	189,767	167,751	88,703	138,917	136,145	...
Black.	241,830	26,395	25,727	29,221	36,326	24,880	23,871	12,335	25,106	37,969	...
All gestation periods ²											
All races ³	100.0	9.7	10.7	14.9	20.0	14.8	12.9	6.6	10.4	...	30.5
White.	100.0	8.3	9.9	14.8	20.5	15.6	13.4	6.9	10.6	...	30.7
Black.	100.0	15.8	14.1	15.0	17.6	11.3	10.6	5.3	10.3	...	28.6
Under 37 weeks											
All races ³	100.0	17.4	15.1	15.8	17.7	11.4	9.6	4.7	8.3	...	26.8
White.	100.0	14.2	13.9	16.1	18.5	12.6	10.5	5.3	8.9	...	28.4
Black.	100.0	24.6	17.6	14.9	15.7	8.6	7.8	3.6	7.1	...	25.0
37–39 weeks											
All races ³	100.0	9.4	11.0	15.6	20.6	14.9	12.6	6.3	9.5	...	30.4
White.	100.0	8.2	10.2	15.5	21.1	15.7	13.1	6.6	9.6	...	30.6
Black.	100.0	14.7	14.0	15.7	18.2	11.6	10.8	5.3	9.8	...	28.7
40 weeks and over											
All races ³	100.0	8.3	9.5	14.1	19.9	15.5	13.8	7.3	11.8	...	30.9
White.	100.0	7.4	8.9	14.0	20.2	16.1	14.2	7.5	11.8	...	31.0
Black.	100.0	12.9	12.6	14.3	17.8	12.2	11.7	6.1	12.3	...	30.3

¹Expressed in completed weeks.²Includes births with period of gestation not stated.³Includes races other than white and black.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 20. Percent low birthweight by weight gain during pregnancy, period of gestation, and race of mother: Total of 49 reporting States and the District of Columbia, 1992

[Low birthweight is defined as weight of less than 2,500 grams (5lb 8 oz)]

Period of gestation ¹ and race of mother	Total	Weight gain during pregnancy								Not stated
		Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	
All gestational periods ²										
All races ³	7.3	15.3	10.9	7.3	5.6	4.4	4.2	4.1	4.4	10.9
White.	5.9	12.2	9.2	6.3	4.7	3.9	3.7	3.6	3.9	8.4
Black.	13.4	23.4	16.8	12.2	10.1	8.2	7.4	6.7	6.6	18.0
Under 37 weeks										
All races ³	42.4	58.1	48.5	40.2	35.4	31.8	31.9	31.5	32.2	50.3
White.	40.6	57.2	47.9	39.7	34.7	31.2	31.9	31.6	32.9	47.7
Black.	47.0	60.5	50.3	42.2	37.9	34.5	32.9	32.2	31.2	55.1
37–39 weeks										
All races ³	4.5	7.8	6.4	4.8	3.8	3.3	3.1	3.1	3.2	5.9
White.	3.8	6.4	5.5	4.2	3.3	2.9	2.8	2.9	2.9	4.7
Black.	7.6	11.7	9.4	7.5	6.5	5.7	5.0	4.5	4.6	9.3
40 weeks and over										
All races ³	1.6	3.4	2.5	1.8	1.4	1.0	0.9	0.9	1.0	2.4
White.	1.2	2.5	2.0	1.5	1.1	0.9	0.8	0.7	0.8	1.7
Black.	3.6	6.3	4.7	3.6	3.0	2.3	2.2	1.9	1.9	4.7

¹Expressed in completed weeks.²Includes births with period of gestation not stated.³Includes races other than white and black.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 21. Number of live births and percent distribution by weight gain during pregnancy and median weight gain, according to period of gestation, Hispanic origin of mother, and race of mother for mothers of non-Hispanic origin: Total of 48 reporting States and the District of Columbia, 1992

Period of gestation ¹ and race of mother	All births	Weight gain during pregnancy									Median weight gain
		Total	Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	
All gestational periods ²	Number	Percent distribution									Pounds
All origins ³	3,447,294	100.0	9.7	10.7	14.9	20.0	14.8	12.9	6.6	10.4	30.5
Hispanic	379,746	100.0	11.9	12.9	15.4	19.5	13.5	11.6	6.0	9.3	29.9
Mexican	209,987	100.0	13.0	13.8	15.7	18.9	13.1	11.1	5.8	8.6	28.8
Puerto Rican	57,459	100.0	11.3	12.2	15.1	18.8	13.4	11.8	6.3	11.1	30.2
Cuban	10,622	100.0	7.1	8.8	12.5	21.8	15.1	15.0	7.2	12.5	31.0
Central and South American	58,790	100.0	10.4	12.6	15.4	21.4	13.8	12.3	5.7	8.5	30.1
Other and unknown Hispanic	42,888	100.0	10.9	11.6	15.0	19.5	14.4	11.8	6.5	10.3	30.3
Non-Hispanic ⁴	3,031,339	100.0	9.5	10.5	14.9	20.0	14.9	13.0	6.6	10.6	30.5
White	2,298,955	100.0	7.9	9.5	14.7	20.6	15.9	13.6	7.0	10.8	30.7
Black	611,940	100.0	15.9	14.1	15.0	17.5	11.3	10.6	5.3	10.3	28.5
Under 37 weeks											
All origins ³	372,664	100.0	17.4	15.1	15.8	17.7	11.4	9.6	4.7	8.3	26.8
Hispanic	42,091	100.0	18.1	16.2	15.6	17.9	11.1	9.0	4.7	7.3	26.0
Mexican	22,621	100.0	19.0	16.7	15.5	17.1	10.9	9.2	4.8	6.9	25.8
Puerto Rican	7,538	100.0	18.1	16.3	16.0	16.9	11.2	8.8	4.5	8.2	25.9
Cuban	1,076	100.0	13.8	12.3	12.7	20.9	11.5	11.1	6.3	11.3	30.2
Central and South American	5,992	100.0	17.1	16.7	16.1	20.4	11.0	8.6	4.0	6.1	26.1
Other and unknown Hispanic	4,864	100.0	16.9	14.8	15.7	19.1	11.6	8.9	4.9	8.2	26.9
Non-Hispanic ⁴	326,865	100.0	17.3	15.0	15.8	17.7	11.4	9.7	4.8	8.4	26.9
White	201,089	100.0	13.5	13.6	16.2	18.6	12.8	10.7	5.4	9.2	28.7
Black	113,315	100.0	24.6	17.6	14.9	15.7	8.6	7.8	3.6	7.1	24.9
37–39 weeks											
All origins ³	1,450,935	100.0	9.4	11.0	15.6	20.6	14.9	12.6	6.3	9.5	30.4
Hispanic	164,140	100.0	11.6	13.2	15.9	20.0	13.6	11.4	5.7	8.6	29.5
Mexican	90,856	100.0	12.8	14.1	16.2	19.4	13.2	10.9	5.5	7.9	28.5
Puerto Rican	24,680	100.0	10.8	12.3	15.7	19.8	13.5	11.8	5.9	10.3	30.2
Cuban	4,795	100.0	6.7	9.1	13.4	22.8	15.2	14.9	6.8	11.1	30.8
Central and South American	25,283	100.0	10.1	12.8	15.5	22.2	14.2	12.2	5.2	7.9	30.1
Other and unknown Hispanic	18,526	100.0	10.8	12.1	15.7	19.3	14.6	11.3	6.7	9.5	30.1
Non-Hispanic ⁴	1,272,664	100.0	9.2	10.7	15.6	20.7	15.1	12.7	6.3	9.6	30.4
White	959,307	100.0	7.7	9.8	15.5	21.3	16.0	13.3	6.7	9.8	30.6
Black	258,401	100.0	14.8	14.0	15.7	18.1	11.6	10.8	5.3	9.8	28.6
40 weeks and over											
All origins ³	1,605,785	100.0	8.3	9.5	14.1	19.9	15.5	13.8	7.3	11.8	30.8
Hispanic	170,851	100.0	10.7	11.9	14.8	19.3	13.9	12.4	6.6	10.5	30.3
Mexican	95,483	100.0	11.9	12.9	15.2	18.8	13.5	11.7	6.3	9.7	30.0
Puerto Rican	24,385	100.0	10.0	10.9	14.4	18.5	13.8	12.6	7.1	12.7	30.6
Cuban	4,734	100.0	6.1	7.8	11.5	21.0	15.8	15.9	7.9	14.1	32.6
Central and South American	27,134	100.0	9.4	11.5	15.1	20.8	14.0	13.2	6.5	9.6	30.4
Other and unknown Hispanic	19,115	100.0	9.5	10.3	14.1	19.7	14.9	12.9	6.8	11.7	30.6
Non-Hispanic ⁴	1,418,081	100.0	8.0	9.3	14.0	19.9	15.6	13.9	7.3	11.9	30.9
White	1,130,350	100.0	7.0	8.5	13.9	20.3	16.3	14.4	7.6	11.9	31.1
Black	235,504	100.0	13.0	12.7	14.4	17.8	12.2	11.7	6.0	12.3	30.2

¹Expressed in completed weeks.²Includes births with period of gestation not stated.³Includes origin not stated.⁴Includes races other than white and black.

NOTE: Excludes data for California and New Hampshire, which did not require reporting of either weight gain during pregnancy or Hispanic origin of mother.

Table 22. Percent low birthweight by weight gain during pregnancy and Hispanic origin of mother, and by race of mother for mothers of non-Hispanic origin: Total of 48 reporting States and the District of Columbia, 1992

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Origin of mother	Total	Weight gain during pregnancy								Not stated
		Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	
All origins ¹	7.3	15.3	10.9	7.3	5.6	4.4	4.2	4.1	4.4	10.9
Hispanic	6.7	11.8	8.4	6.3	5.1	4.3	4.0	3.8	3.8	8.6
Mexican	6.0	10.1	7.4	5.6	4.5	3.8	3.7	3.8	3.6	7.5
Puerto Rican	9.2	17.8	11.6	8.7	7.0	5.5	5.1	3.9	4.5	12.9
Cuban	6.2	15.3	9.7	6.2	4.7	5.0	3.9	4.4	3.4	12.3
Central and South American	5.9	10.7	7.4	5.5	4.9	4.0	3.4	3.0	3.5	7.9
Other and unknown Hispanic	7.5	14.1	10.2	7.2	6.0	4.9	4.4	4.3	4.4	9.6
Non-Hispanic ²	7.4	15.8	11.2	7.4	5.6	4.5	4.3	4.1	4.4	11.5
White	5.8	12.3	9.4	6.3	4.7	3.8	3.7	3.6	4.0	8.3
Black	13.4	23.5	16.9	12.3	10.2	8.3	7.5	6.7	6.6	18.2

¹Includes origin not stated.²Includes races other than white and black.

NOTE: Excludes data for California and New Hampshire, which did not require reporting of either weight gain during pregnancy or Hispanic origin of mother.

Table 23. Percent of births with selected medical or health characteristics, by specified race of mother: United States, 1992

Characteristic	All races	White	Black	American Indian ¹	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
Mother										
Prenatal care beginning in the first trimester	77.7	80.8	63.9	62.1	76.6	83.8	88.2	69.9	78.7	72.8
Third trimester or no prenatal care	5.2	4.2	9.9	11.0	4.9	2.9	2.4	7.0	4.3	5.9
Smoker ²	16.9	17.9	13.8	22.5	4.8	1.7	6.6	18.5	4.8	3.6
Drinker ³	2.6	2.4	3.3	6.6	1.0	1.2	1.5	2.7	0.7	0.8
Weight gain of less than 16 lbs ⁴	9.7	8.3	15.8	14.0	10.0	7.0	9.3	8.9	8.0	11.5
Cesarean delivery rate	22.3	22.5	22.1	17.9	19.8	20.8	19.5	18.0	24.3	18.0
Infant										
Preterm births ⁵	10.7	9.1	18.4	11.6	9.9	7.0	7.9	11.4	10.9	10.5
Birthweight										
Very low birthweight ⁶	1.3	1.0	3.0	1.0	0.9	0.7	0.8	1.0	1.1	0.9
Low birthweight ⁷	7.1	5.8	13.3	6.2	6.6	5.0	7.0	6.9	7.4	6.7
4,000 grams or more ⁸	10.7	12.1	5.3	12.3	6.1	6.2	5.1	9.0	6.3	5.9
5-minute Apgar score of less than 7 ⁹	1.5	1.2	2.6	1.4	1.1	0.9	0.8	1.0	1.1	1.1
1-minute Apgar score of less than 7 ⁹	8.5	7.9	11.0	8.8	6.4	4.8	4.9	6.8	7.5	6.6

¹Includes births to Aleuts and Eskimos.²Excludes data from California, Indiana, New York, and South Dakota, which did not require reporting of tobacco use.³Excludes data from California, New York, and South Dakota, which did not require reporting of alcohol use.⁴Excludes data from California, which did not require reporting of weight gain.⁵Born prior to 37 completed weeks of gestation.⁶Birthweight of less than 1,500 grams (3 lb 4 oz) or more.⁷Birthweight of less than 2,500 grams (5 lb 8 oz).⁸Equivalent to 8 lb 14 oz or more.⁹Excludes data for California and Texas, which did not require reporting of either 1- or 5-minute Apgar score.

Table 24. Percent of births with selected medical or health characteristics, by Hispanic origin of mother and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 1992

Characteristic	All origins ¹	Origin of mother								
		Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Mother										
Prenatal care beginning in the first trimester	77.7	64.2	62.1	67.8	86.8	66.8	68.0	80.3	84.9	64.0
Third trimester or no prenatal care	5.2	9.5	10.5	8.0	2.1	7.9	7.5	4.4	2.8	9.8
Smoker ³	16.9	5.8	4.3	12.7	5.9	2.6	10.1	18.2	19.7	13.8
Drinker ⁴	2.6	1.2	1.0	2.6	0.9	0.8	2.0	2.7	2.5	3.3
Weight gain of less than 16 lbs ⁵	9.7	11.9	13.0	11.3	7.1	10.4	10.9	9.5	7.9	15.9
Cesarean delivery rate	22.3	21.2	20.5	21.9	33.9	22.1	22.5	22.5	22.8	22.2
Infant										
Preterm births ⁶	10.7	10.7	10.4	13.2	10.0	10.5	11.2	10.7	8.7	18.5
Birthweight										
Very low birthweight ⁷	1.3	1.0	0.9	1.7	1.2	1.0	1.1	1.3	0.9	3.0
Low birthweight ⁸	7.1	6.1	5.6	9.2	6.1	5.8	7.2	7.3	5.7	13.4
4,000 grams or more ⁹	10.7	9.3	9.7	7.1	10.2	9.4	7.9	11.0	12.7	5.3
5-minute Apgar scores of less than 7 ¹⁰	1.5	1.2	1.3	1.4	0.9	1.0	1.3	1.5	1.2	2.6
1-minute Apgar scores of less than 7 ¹⁰	8.5	7.2	7.9	7.0	4.6	6.2	8.2	8.6	8.0	11.0

¹Includes origin not stated.

²Includes races other than white and black.

³Excludes data for California, Indiana, New York, and South Dakota, which did not require reporting of tobacco use.

⁴Excludes data from California, New York, and South Dakota, which did not require reporting of alcohol use.

⁵Excludes data from California, which did not require reporting of weight gain.

⁶Born prior to 37 completed weeks of gestation.

⁷Birthweight of less than 1,500 grams (3 lb 4 oz).

⁸Birthweight of less than 2,500 grams (5 lb 8 oz).

⁹Equivalent to 8 lb 14 oz or more.

¹⁰Excludes data for California and Texas, which did not require reporting of either 1- or 5-minute Apgar score.

NOTE: Excludes New Hampshire, which did not require reporting of Hispanic origin of mother.

Table 25. Live births with selected medical risk factors and rates by age of mother, by race of mother: United States, 1992

[Rates are number of live births with specified medical risk factor per 1,000 live births in specified group]

Medical risk factor and race of mother	All births ¹	Medical risk factor reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
All races ²	Number					Rate				Number
Anemia	4,065,014	71,942	18.3	26.8	22.0	15.5	14.2	14.1	14.8	123,515
Cardiac disease	4,065,014	15,544	3.9	2.3	2.9	4.0	5.2	5.8	6.4	123,515
Acute or chronic lung disease	4,065,014	16,593	4.2	5.3	4.3	3.7	3.9	4.6	4.9	123,515
Diabetes	4,065,014	102,253	25.9	8.9	16.4	25.6	35.3	50.6	69.6	123,515
Genital herpes ^{3,4}	3,588,024	28,747	8.2	5.6	7.1	7.9	9.9	11.6	10.5	78,494
Hydramnios/Oligohydramnios ³	3,908,869	29,860	7.9	8.2	7.9	7.4	7.5	9.2	11.0	116,158
Hemoglobinopathy ³	3,908,869	2,160	0.6	0.8	0.6	0.5	0.5	0.5	0.5	116,158
Hypertension, chronic	4,065,014	25,964	6.6	2.7	4.0	5.9	8.6	14.4	24.5	123,515
Hypertension, pregnancy-associated	4,065,014	112,419	28.5	33.4	28.6	27.3	26.0	30.4	37.8	123,515
Eclampsia	4,065,014	14,369	3.6	5.6	3.7	3.1	3.1	3.6	4.6	123,515
Incompetent cervix ³	3,908,869	8,516	2.2	1.1	1.6	2.2	3.0	3.9	3.6	116,158
Previous infant 4,000+ grams ³	3,908,869	38,793	10.2	1.6	6.3	11.0	15.2	18.4	21.4	116,158
Previous preterm or small-for- gestational-age infant ³	3,908,869	45,073	11.9	6.1	11.8	12.0	13.4	15.9	17.0	116,158
Renal disease	4,065,014	8,933	2.3	2.9	2.7	2.1	1.8	1.8	2.2	123,515
Rh sensitization ⁵	4,026,987	24,832	6.4	4.9	5.9	6.5	7.1	7.2	7.1	124,509
Uterine bleeding ⁴	3,744,169	29,159	8.0	6.1	7.2	8.0	9.1	9.6	10.4	85,870
White										
Anemia	3,201,678	47,424	15.3	22.4	18.2	13.1	12.7	12.6	13.1	95,836
Cardiac disease	3,201,678	12,924	4.2	2.2	3.0	4.2	5.5	6.0	6.5	95,836
Acute or chronic lung disease	3,201,678	12,327	4.0	4.8	3.9	3.6	3.8	4.5	5.3	95,836
Diabetes	3,201,678	81,610	26.3	9.9	17.2	25.5	34.1	48.2	66.0	95,836
Genital herpes ^{3,4}	2,795,677	23,295	8.5	4.6	6.7	8.2	10.7	13.1	12.2	57,467
Hydramnios/Oligohydramnios ³	3,065,875	22,765	7.6	7.9	7.9	7.1	7.2	9.0	10.3	89,928
Hemoglobinopathy ³	3,065,875	770	0.3	0.2	0.2	0.3	0.2	0.4	*	89,928
Hypertension, chronic	3,201,678	17,936	5.8	2.3	3.6	5.2	7.3	11.8	19.9	95,836
Hypertension, pregnancy-associated	3,201,678	90,686	29.2	34.4	30.2	28.1	26.2	30.2	37.2	95,836
Eclampsia	3,201,678	10,242	3.3	4.6	3.5	3.0	2.9	3.3	4.1	95,836
Incompetent cervix ³	3,065,875	6,301	2.1	1.1	1.4	2.0	2.9	3.8	3.5	89,928
Previous infant 4,000+ grams ³	3,065,875	34,926	11.7	1.8	7.2	12.2	16.8	20.5	23.8	89,928
Previous preterm or small-for- gestational-age infant ³	3,065,875	33,763	11.3	5.5	10.8	11.2	13.0	15.6	16.5	89,928
Renal disease	3,201,678	7,268	2.3	3.3	2.8	2.2	1.8	1.8	2.2	95,836
Rh sensitization ⁵	3,168,004	22,375	7.3	5.9	6.8	7.4	8.0	8.1	8.2	96,760
Uterine bleeding ⁴	2,931,480	24,098	8.4	6.5	7.6	8.3	9.5	9.9	11.0	63,392
Black										
Anemia	673,633	20,325	31.3	35.5	34.5	28.7	25.1	24.4	23.3	23,778
Cardiac disease	673,633	2,190	3.4	2.7	2.8	3.6	4.3	5.4	7.0	23,778
Acute or chronic lung disease	673,633	3,665	5.6	6.8	5.9	4.5	5.1	6.0	3.7	23,778
Diabetes	673,633	13,870	21.3	6.5	13.1	24.0	39.1	57.9	84.3	23,778
Genital herpes ^{3,4}	613,955	4,723	7.9	7.9	9.2	7.8	6.7	5.7	4.4	18,157
Hydramnios/Oligohydramnios ³	656,971	5,797	9.1	8.9	8.1	9.3	9.8	12.1	16.4	22,498
Hemoglobinopathy ³	656,971	1,259	2.0	2.1	2.0	2.0	1.8	1.7	*	22,498
Hypertension, chronic	673,633	7,200	11.1	3.9	5.8	11.0	20.4	36.4	59.9	23,778
Hypertension, pregnancy-associated	673,633	17,986	27.7	31.1	24.1	26.0	28.2	35.2	50.9	23,778
Eclampsia	673,633	3,587	5.5	7.8	4.9	4.3	4.8	6.2	8.3	23,778
Incompetent cervix ³	656,971	1,945	3.1	1.2	2.4	3.9	5.0	5.4	4.5	22,498
Previous infant 4,000+ grams ³	656,971	2,448	3.9	0.9	2.8	4.8	6.8	8.1	12.4	22,498
Previous preterm or small-for- gestational-age infant ³	656,971	9,424	14.9	7.5	15.5	17.5	18.5	19.5	19.3	22,498
Renal disease	673,633	1,336	2.1	2.2	2.3	1.8	1.8	1.7	*	23,778
Rh sensitization ⁵	670,319	2,092	3.2	2.9	3.2	3.2	3.6	4.0	4.1	23,833
Uterine bleeding ⁴	630,617	3,965	6.5	5.3	6.1	7.1	7.4	7.8	9.8	19,437

¹Total number of births to residents of areas reporting specified medical risk factor.²Includes races other than white and black.³New York City (but not New York State) reports this risk factor.⁴Texas does not report this risk factor.⁵Kansas does not report this risk factor.

Table 26. Number and rate of live births with selected medical risk factors, complications of labor, and obstetric procedures, by specified race of mother: United States, 1992

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All races	White	Black	American Indian ¹	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
Medical risk factors					Number					
Anemia.	71,942	47,424	20,325	2,189	2,004	255	61	157	341	1,190
Diabetes	102,253	81,610	13,870	1,686	5,087	1,022	283	175	1,128	2,479
Hypertension, pregnancy-associated.	112,419	90,686	17,986	1,615	2,132	244	141	112	623	1,012
Uterine bleeding ²	29,159	24,098	3,965	346	750	115	61	13	158	403
Complications of labor and/or delivery										
Meconium, moderate/heavy	240,705	175,207	55,024	2,516	7,958	1,253	317	347	1,623	4,418
Premature rupture of membrane	126,597	96,178	24,680	1,719	4,020	738	242	148	715	2,177
Dysfunctional labor	116,959	95,804	16,366	1,209	3,580	738	210	90	639	1,903
Breech/Malpresentation.	149,063	123,531	19,068	1,414	5,050	862	362	229	997	2,600
Cephalopelvic disproportion ^{3,4}	117,118	95,401	15,887	958	4,872	897	312	223	1,228	2,212
Fetal distress ⁴	153,484	114,623	32,645	1,446	4,770	761	264	157	1,063	2,525
Obstetric procedures										
Amniocentesis	126,433	107,788	11,629	943	6,073	1,502	782	194	1,299	2,296
Electronic fetal monitoring	3,076,276	2,439,042	503,787	29,500	103,947	17,252	6,377	4,579	19,641	56,098
Induction of labor	453,093	384,968	52,371	4,600	11,154	2,012	755	460	2,032	5,895
Ultrasound.	2,305,538	1,862,716	345,894	22,331	74,597	11,970	5,125	3,375	14,530	39,597
Stimulation of labor	513,161	416,908	73,998	4,747	17,508	3,094	1,177	728	3,106	9,403
Medical risk factors					Rate					
Anemia.	18.3	15.3	31.3	57.0	13.6	10.3	6.8	26.8	11.9	15.0
Diabetes	25.9	26.3	21.3	43.9	34.5	41.4	31.4	29.8	39.4	31.3
Hypertension, pregnancy-associated.	28.5	29.2	27.7	42.1	14.5	9.9	15.6	19.1	21.7	12.8
Uterine bleeding ²	8.0	8.4	6.5	9.2	5.3	4.8	6.9	*	5.7	5.4
Complications of labor and/or delivery										
Meconium, moderate/heavy	60.9	56.2	84.3	65.4	54.0	50.8	35.1	59.1	56.6	55.8
Premature rupture of membrane	32.0	30.9	37.8	44.7	27.3	29.9	26.8	25.2	24.9	27.5
Dysfunctional labor	29.6	30.7	25.1	31.4	24.3	29.9	23.3	15.3	22.3	24.0
Breech/Malpresentation.	37.7	39.6	29.2	36.7	34.2	34.9	40.1	39.0	34.8	32.8
Cephalopelvic disproportion ^{3,4}	33.3	34.8	26.6	25.6	35.3	38.8	36.1	38.4	44.5	30.3
Fetal distress ⁴	41.9	39.9	53.3	38.2	33.8	32.0	29.8	27.0	38.0	33.7
Obstetric procedures										
Amniocentesis	31.7	34.3	17.7	24.4	41.0	60.6	86.6	33.0	45.2	28.8
Electronic fetal monitoring	772.5	777.0	767.6	762.9	701.9	696.2	706.0	780.1	682.8	704.4
Induction of labor	113.8	122.6	79.8	119.0	75.3	81.2	83.6	78.4	70.6	74.0
Ultrasound.	579.0	593.4	527.0	577.5	503.7	483.0	567.4	575.0	505.1	497.2
Stimulation of labor	128.9	132.8	112.7	122.8	118.2	124.9	130.3	124.0	108.0	118.1

¹Includes births to Aleuts and Eskimos.²Texas does not report this risk factor.³New York City (but not New York State) reports this complication.⁴Texas does not report this complication.

Table 27. Number and rate of live births with selected medical risk factors, complications of labor, and obstetric procedures, by Hispanic origin of mother and by race of mother for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 1992

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All origins ¹	Origin of mother								
		Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Medical risk factors		Number								
Anemia.	71,722	11,137	6,567	1,482	192	916	1,980	59,857	36,059	19,872
Diabetes	101,975	14,833	9,227	1,805	330	2,164	1,307	86,064	66,085	13,507
Hypertension, pregnancy-associated.	112,016	11,647	7,413	1,094	248	1,447	1,445	99,326	78,131	17,613
Uterine bleeding ³	29,050	2,522	1,451	354	47	431	239	26,142	21,190	3,893
Complications of labor and/or delivery										
Meconium, moderate/heavy	239,817	38,002	23,718	4,123	600	6,376	3,185	199,399	135,791	53,702
Premature rupture of membrane	125,654	14,217	7,554	2,314	293	2,528	1,528	109,834	80,357	24,016
Dysfunctional labor	116,415	16,582	10,134	1,850	460	2,453	1,685	98,395	77,991	15,842
Breech/Malpresentation.	148,385	19,144	12,373	1,977	443	2,677	1,674	127,754	102,996	18,583
Cephalopelvic disproportion ^{4,5}	116,421	12,645	7,886	1,350	379	1,816	1,214	102,730	81,617	15,581
Fetal distress ⁵	152,891	18,289	11,066	2,024	373	3,198	1,628	133,162	95,281	31,953
Obstetric procedures										
Amniocentesis	125,543	10,409	5,749	1,202	326	1,722	1,410	112,781	94,739	11,297
Electronic fetal monitoring	3,062,950	426,591	274,278	45,972	8,334	61,363	36,644	2,608,043	1,988,575	492,004
Induction of labor	450,823	44,521	28,802	4,766	872	5,397	4,684	401,823	335,543	51,201
Ultrasound.	2,293,115	266,658	168,512	31,596	5,247	34,895	26,408	2,003,375	1,572,467	338,335
Stimulation of labor	511,126	63,868	41,139	6,869	1,040	8,298	6,522	442,128	348,990	71,881
Medical risk factors		Rate								
Anemia.	18.3	18.0	15.8	25.9	16.8	10.5	41.1	18.3	14.7	31.3
Diabetes	26.0	23.9	22.2	31.5	29.0	24.8	27.1	26.3	26.9	21.3
Hypertension, pregnancy-associated.	28.5	18.8	17.8	19.1	21.8	16.6	30.0	30.4	31.8	27.7
Uterine bleeding ³	8.0	4.9	4.5	6.3	4.2	5.3	6.0	8.4	9.1	6.5
Complications of labor and/or delivery										
Meconium, moderate/heavy	60.9	60.9	56.5	71.9	52.7	73.2	65.5	60.8	55.1	84.3
Premature rupture of membrane	31.9	22.8	18.0	40.4	25.7	29.0	31.4	33.5	32.6	37.7
Dysfunctional labor	29.6	26.6	24.1	32.3	40.4	28.2	34.7	30.0	31.7	24.9
Breech/Malpresentation.	37.7	30.7	29.5	34.5	38.9	30.7	34.4	39.0	41.8	29.2
Cephalopelvic disproportion ^{4,5}	33.3	25.3	24.7	25.3	34.3	23.3	31.1	34.7	36.9	26.7
Fetal distress ⁵	41.9	35.9	34.6	35.8	33.3	39.1	40.4	42.9	40.8	53.4
Obstetric procedures										
Amniocentesis	31.7	16.5	13.6	20.9	28.6	19.7	28.3	34.2	38.2	17.6
Electronic fetal monitoring	772.3	678.1	648.1	800.0	730.0	703.6	735.9	790.4	801.8	767.5
Induction of labor	113.7	70.8	68.1	82.9	76.4	61.9	94.1	121.8	135.3	79.9
Ultrasound.	578.2	423.9	398.2	549.8	459.6	400.1	530.3	607.1	634.0	527.8
Stimulation of labor	128.9	101.5	97.2	119.5	91.1	95.1	131.0	134.0	140.7	112.1

¹Includes origin not stated.²Includes races other than white and black.³Texas does not report this factor.⁴New York City (but not New York State) reports this complication.⁵Texas does not report this complication.

NOTE: Excludes New Hampshire, which did not require reporting of Hispanic origin of mother.

Table 28. Number of live births by smoking status of mother, percent smokers, and percent distribution by average number of cigarettes smoked by mothers per day, according to age and race of mother: Total of 46 reporting States and the District of Columbia, 1992

Smoking status, smoking measure, and race of mother	All ages	Age of mother								
		Under 15 years	15–19 years					30–34 years	35–39 years	40–49 years
			Total	15–17 years	18–19 years	20–24 years	25–29 years			
All races ¹						Number				
Total	3,080,239	9,772	397,738	147,376	250,362	825,367	891,828	667,846	248,391	39,297
Smoker	506,023	652	71,812	22,401	49,411	163,134	139,729	94,014	32,295	4,387
Nonsmoker	2,486,246	8,831	315,174	120,870	194,304	639,953	726,855	553,655	208,190	33,588
Not stated.	87,970	289	10,752	4,105	6,647	22,280	25,244	20,177	7,906	1,322
White										
Total	2,413,588	3,809	259,314	88,637	170,677	616,031	732,081	563,415	206,826	32,112
Smoker	420,713	531	62,506	19,379	43,127	138,063	114,596	76,046	25,480	3,491
Nonsmoker	1,925,482	3,148	189,921	66,784	123,137	461,887	597,346	470,766	174,866	27,548
Not stated.	67,393	130	6,887	2,474	4,413	16,081	20,139	16,603	6,480	1,073
Black										
Total	556,629	5,704	127,181	54,642	72,539	183,265	127,147	78,324	30,055	4,953
Smoker	74,450	100	7,346	2,305	5,041	21,591	22,361	16,214	6,067	771
Nonsmoker	465,256	5,450	116,344	50,832	65,512	156,266	100,718	59,481	22,989	4,008
Not stated.	16,923	154	3,491	1,505	1,986	5,408	4,068	2,629	999	174
						Percent				
Smoker ¹	16.9	6.9	18.6	15.6	20.3	20.3	16.1	14.5	13.4	11.6
White.	17.9	14.4	24.8	22.5	25.9	23.0	16.1	13.9	12.7	11.2
Black.	13.8	1.8	5.9	4.3	7.1	12.1	18.2	21.4	20.9	16.1
All races ¹						Percent distribution				
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	21.4	38.7	27.2	31.2	25.4	21.7	20.2	19.6	18.6	18.4
6–10 cigarettes	40.4	40.4	43.5	44	43.3	41.3	40	38.6	36.8	34.9
11–15 cigarettes	6.5	4.8	5.2	4.4	5.6	6.4	6.9	7.1	6.5	7.0
16–20 cigarettes	26.3	14.3	21	18	22.4	26	27.4	27.9	29.3	29.8
21–30 cigarettes	3.7	*	2.2	1.8	2.3	3.2	3.9	4.7	5.6	6.0
31–40 cigarettes	1.4	*	0.8	0.6	0.9	1.2	1.4	1.9	2.8	3.3
41 cigarettes or more.	0.2	*	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.5
White										
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	18.7	34.6	24.3	28.3	22.5	18.6	17.3	17.2	16.3	16.2
6–10 cigarettes	39.9	42.3	44.2	45.0	43.8	41.2	39.1	37.4	35.2	33.9
11–15 cigarettes	7.2	5.2	5.6	4.7	6.0	7.0	7.7	7.9	7.1	7.6
16–20 cigarettes	28.3	16.3	22.6	19.3	24.1	28.2	29.7	29.9	31.3	31.2
21–30 cigarettes	4.2	*	2.4	2.0	2.5	3.6	4.5	5.3	6.4	6.9
31–40 cigarettes	1.5	*	0.8	0.6	0.9	1.2	1.6	2.0	3.2	3.7
41 cigarettes or more.	0.2	*	0.1	*	0.1	0.2	0.2	0.2	0.5	*
Black										
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	35.4	57.1	48.0	52.1	46.2	39.2	34.1	29.9	27.0	27.1
6–10 cigarettes	42.9	31.9	38.4	35.5	39.8	42.6	44.1	44.1	43.0	38.9
11–15 cigarettes	3.0	*	2.1	1.7	2.2	2.5	3.1	3.6	3.9	4.5
16–20 cigarettes	16.0	*	9.9	9.0	10.3	13.8	16.3	19.1	21.8	24.2
21–30 cigarettes	1.5	*	0.8	*	0.8	1.2	1.5	1.9	2.3	2.9
31–40 cigarettes	0.9	*	0.7	*	0.6	0.7	0.8	1.2	1.6	*
41 cigarettes or more.	0.2	*	*	*	*	0.1	0.2	0.2	0.4	*

¹Includes races other than white and black.

NOTE: Excludes data for California, Indiana, New York, and South Dakota, which did not require reporting of tobacco use during pregnancy.

Table 29. Number of live births by smoking status of mother and percent of mothers who smoked cigarettes during pregnancy, by age and Hispanic origin of mother and by race of mother for mothers of non-Hispanic origin: Total of 45 reporting States and the District of Columbia, 1992

Origin of mother	Smoking status						Age of mother							
	Total	Smoker	Nonsmoker	Not stated	All ages	Under 15 years	15–19 years							
							Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years
Number						Percent smokers								
All origins ¹	3,064,249	502,897	2,473,412	87,940	16.9	6.9	18.5	15.6	20.0	20.3	16.1	14.5	13.4	11.5
Hispanic	324,649	18,081	294,919	11,649	5.8	3.4	5.8	5.3	6.0	6.1	5.5	5.7	5.7	5.0
Mexican	203,564	8,317	187,051	8,196	4.3	3.4	4.1	3.8	4.2	4.2	4.1	4.7	4.6	4.6
Puerto Rican	35,960	4,390	30,215	1,355	12.7	*	11.2	9.4	12.2	13.9	13.0	12.5	11.5	9.7
Cuban	10,022	590	9,350	82	5.9	*	6.6	*	6.1	6.3	5.2	6.4	6.9	*
Central and South American	35,508	890	33,724	894	2.6	*	3.0	3.1	3.0	2.3	2.4	2.8	3.2	*
Other and unknown Hispanic	39,595	3,894	34,579	1,122	10.1	*	9.5	8.5	10.1	11.3	9.8	9.1	10.3	10.2
Non-Hispanic ²	2,714,613	480,240	2,161,480	72,893	18.2	7.4	20.6	17.5	22.2	22.3	17.2	15.2	14.1	12.3
White	2,063,552	396,714	1,613,497	53,341	19.7	20.9	29.9	28.3	30.4	26.2	17.4	14.7	13.5	12.1
Black	546,925	73,399	457,364	16,162	13.8	1.8	5.9	4.3	7.0	12.1	18.3	21.6	21.0	16.4

¹Includes origin not stated.²Includes races other than white and black.

NOTE: Excludes data for California, Indiana, New Hampshire, New York, and South Dakota, which did not require reporting of either Hispanic origin of mother or tobacco use during pregnancy.

Table 30. Number of live births, percent of mothers who smoked cigarettes during pregnancy, and percent distribution by average number of cigarettes smoked by mothers per day, according to educational attainment and race of mother: Total of 46 reporting States and the District of Columbia, 1992

Smoking measure and race of mother	Years of school completed by mother						
	Total	0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated
	Number						
All races ¹	3,080,239	144,221	515,655	1,143,580	646,489	581,145	49,149
White	2,413,588	116,035	350,357	877,591	520,880	514,397	34,328
Black	556,629	20,455	148,517	230,587	105,876	40,578	10,616
	Percent						
Smoker ¹	16.9	16.8	30.6	20.1	12.0	3.9	17.2
White	17.9	18.3	35.9	22.1	12.6	4.0	17.5
Black	13.8	11.4	19.3	13.5	10.1	4.7	20.3
All races ¹	Percent distribution						
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	61.9	55.9	60.5	61.2	64.8	73.9	63.7
11–20 cigarettes	32.8	35.6	33.5	33.8	30.7	22.5	30.8
21 cigarettes or more	5.4	8.5	6.0	5.1	4.4	3.6	5.6
White							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	58.6	53.5	56.3	58.0	62.3	73.0	59.9
11–20 cigarettes	35.5	37.3	37.0	36.5	32.8	23.1	33.7
21 cigarettes or more	5.9	9.2	6.8	5.5	4.9	3.8	6.5
Black							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	78.3	72.3	77.6	79.2	79.1	81.0	74.1
11–20 cigarettes	19.0	23.9	19.3	18.4	18.9	17.7	23.0
21 cigarettes or more	2.6	3.9	3.1	2.3	2.0	1.2	2.9

¹Includes races other than white and black.

NOTE: Excludes data for California, Indiana, New York, and South Dakota, which did not require reporting of tobacco use during pregnancy.

Table 31. Percent low birthweight by smoking status, age, and race of mother: Total of 46 reporting States and the District of Columbia, 1992

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Smoking status and race of mother	Age of mother									
	All ages	Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–49 years
			Total	15–17 years	18–19 years					
All races ¹										
Total	7.3	13.4	9.6	10.5	9.1	7.4	6.3	6.6	7.7	8.7
Smoker	11.5	13.2	11.0	11.4	10.8	10.1	11.2	12.9	15.6	16.9
Nonsmoker	6.3	13.4	9.2	10.2	8.6	6.6	5.3	5.5	6.4	7.6
Not stated	9.1	14.2	11.8	13.1	11.1	9.4	8.2	8.0	9.7	9.2
White										
Total	5.9	9.9	7.9	8.5	7.5	6.0	5.2	5.5	6.5	7.4
Smoker	9.7	12.6	10.4	11.0	10.1	8.8	9.1	10.3	12.6	14.2
Nonsmoker	5.0	9.3	6.9	7.8	6.5	5.1	4.4	4.7	5.5	6.6
Not stated	7.2	*	9.8	10.3	9.6	7.3	6.5	6.4	8.3	7.9
Black										
Total	13.4	15.9	13.5	13.9	13.2	12.3	13.1	14.8	16.2	16.7
Smoker	22.1	*	16.7	16.1	17.0	18.8	22.4	25.7	28.6	29.1
Nonsmoker	11.9	16.0	13.2	13.6	12.8	11.3	10.9	11.6	12.8	14.3
Not stated	16.8	14.3	16.2	17.8	15.0	15.6	17.0	18.5	19.4	16.7

¹Includes races other than white and black.

NOTE: Excludes data for California, Indiana, New York, and South Dakota, which did not require reporting of tobacco use during pregnancy.

Table 32. Number of live births by drinking status of mother, percent of mothers who drank during pregnancy, and percent distribution by average number of drinks per week, according to age and race of mother: Total of 47 reporting States and the District of Columbia, 1992

Drinking status, drinking measure, and race of mother	Age of mother									
	All ages	Under 15 years	15–19 years							
			Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years
All races ¹										
Total	3,164,379	9,973	409,406	151,457	257,949	850,586	916,905	683,809	253,578	40,122
Drinker	78,651	82	5,381	1,701	3,680	16,613	22,864	22,723	9,634	1,354
Nondrinker	2,993,122	9,586	392,528	145,397	247,131	810,132	867,819	639,965	235,712	37,380
Not stated	92,606	305	11,497	4,359	7,138	23,841	26,222	21,121	8,232	1,388
White										
Total	2,487,502	3,908	268,377	91,608	176,769	637,837	754,963	578,066	211,503	32,848
Drinker	57,494	46	3,744	1,169	2,575	11,059	16,150	17,725	7,659	1,111
Nondrinker	2,359,345	3,732	257,205	87,794	169,411	609,541	718,027	543,085	197,139	30,616
Not stated	70,663	130	7,428	2,645	4,783	17,237	20,786	17,256	6,705	1,121
Black										
Total	566,055	5,806	129,734	55,737	73,997	186,549	129,060	79,409	30,472	5,025
Drinker	18,262	30	1,251	398	853	4,756	5,906	4,412	1,711	196
Nondrinker	529,591	5,608	124,786	53,752	71,034	176,008	118,767	72,117	27,666	4,639
Not stated	18,202	168	3,697	1,587	2,110	5,785	4,387	2,880	1,095	190
Drinker ¹	2.6	0.8	1.4	1.2	1.5	2.0	2.6	3.4	3.9	3.5
White	2.4	1.2	1.4	1.3	1.5	1.8	2.2	3.2	3.7	3.5
Black	3.3	0.5	1.0	0.7	1.2	2.6	4.7	5.8	5.8	4.1
All races ¹										
Drinker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1 drink or less	60.7	62.7	59.6	59.3	59.7	58.3	60.1	62.6	62.3	58.1
2 drinks	16.5	*	17.0	17.3	16.8	16.2	16.2	16.5	16.8	19.0
3–4 drinks	10.5	*	11.2	11.1	11.2	11.6	10.7	9.9	9.9	9.9
5 drinks or more	12.3	*	12.3	12.3	12.3	13.9	13.0	11.0	11.0	12.9
White										
Drinker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1 drink or less	67.9	*	64.0	62.2	64.8	65.4	69.2	69.1	67.9	62.6
2 drinks	15.2	*	14.9	17.0	14.0	14.9	14.3	15.6	16.2	18.6
3–4 drinks	8.5	*	10.1	9.8	10.2	9.2	8.1	8.1	8.5	9.0
5 drinks or more	8.4	*	11.0	11.0	11.0	10.5	8.4	7.2	7.4	9.8
Black										
Drinker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1 drink or less	37.5	*	48.0	52.6	46.0	42.6	34.8	34.4	33.9	31.7
2 drinks	21.1	*	22.8	18.2	24.8	20.1	22.1	20.6	20.8	23.2
3–4 drinks	16.9	*	14.0	14.2	14.0	16.3	17.8	17.4	16.9	14.1
5 drinks or more	24.5	*	15.1	15.0	15.2	21.0	25.3	27.6	28.4	31.0

¹Includes races other than white and black.

NOTE: Excludes data for California, New York, and South Dakota, which did not require reporting of alcohol use during pregnancy.

Table 33. Live births by month of pregnancy prenatal care began and percent of mothers beginning care in the first trimester and percent with late or no care, by age and race of mother: United States, 1992

		Month of pregnancy prenatal care began									
Age and race of mother	All births	1st trimester			2d trimester	Late or no care			Percent		
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	Not stated	1st trimester	Late or no care
All races ¹	4,065,014	3,091,543	2,260,718	830,825	679,052	205,914	137,257	68,657	88,505	77.7	5.2
Under 15 years	12,220	5,057	2,748	2,309	4,695	2,026	1,370	656	442	42.9	17.2
15–19 years	505,415	292,992	177,586	115,406	151,518	47,838	33,294	14,544	13,067	59.5	9.7
15 years	29,267	14,216	8,040	6,176	10,513	3,595	2,489	1,106	943	50.2	12.7
16 years	60,136	32,093	18,565	13,528	19,825	6,510	4,631	1,879	1,708	54.9	11.1
17 years	98,146	55,639	33,034	22,605	30,366	9,510	6,555	2,955	2,631	58.3	10.0
18 years	138,663	81,180	49,218	31,962	41,016	13,046	9,040	4,006	3,421	60.0	9.6
19 years	179,203	109,864	68,729	41,135	49,798	15,177	10,579	4,598	4,364	62.8	8.7
20–24 years	1,070,490	744,811	509,673	235,138	230,864	70,154	47,917	22,237	24,661	71.2	6.7
25–29 years	1,179,264	958,007	725,886	232,121	152,789	45,003	29,001	16,002	23,465	82.9	3.9
30–34 years	895,271	757,955	588,469	169,486	92,931	26,763	16,832	9,931	17,622	86.4	3.0
35–39 years	344,644	287,523	222,368	65,155	37,962	11,512	7,211	4,301	7,647	85.3	3.4
40 years and over	57,710	45,198	33,988	11,210	8,293	2,618	1,632	986	1,601	80.6	4.7
White	3,201,678	2,541,435	1,887,486	653,949	471,778	130,561	91,717	38,844	57,904	80.8	4.2
Under 15 years	5,367	2,476	1,337	1,139	1,914	821	564	257	156	47.5	15.8
15–19 years	342,739	209,301	127,516	81,785	96,974	28,890	20,745	8,145	7,574	62.4	8.6
15 years	15,966	8,257	4,702	3,555	5,411	1,855	1,289	566	443	53.2	12.0
16 years	37,256	20,941	12,125	8,816	11,662	3,770	2,742	1,028	883	57.6	10.4
17 years	65,564	38,942	23,182	15,760	19,340	5,756	4,111	1,645	1,526	60.8	9.0
18 years	95,949	59,032	35,885	23,147	26,891	7,992	5,729	2,263	2,034	62.9	8.5
19 years	128,004	82,129	51,622	30,507	33,670	9,517	6,874	2,643	2,688	65.5	7.6
20–24 years	814,422	591,097	409,309	181,788	162,132	45,437	32,512	12,925	15,756	74.0	5.7
25–29 years	964,586	809,204	620,832	188,372	110,528	29,087	20,130	8,957	15,767	85.3	3.1
30–34 years	745,510	648,912	509,405	139,507	67,265	17,075	11,603	5,472	12,258	88.5	2.3
35–39 years	282,617	242,906	190,400	52,506	27,021	7,445	4,993	2,452	5,245	87.6	2.7
40 years and over	46,437	37,539	28,687	8,852	5,944	1,806	1,170	636	1,148	82.9	4.0
Black	673,633	415,144	277,970	137,174	170,148	64,024	36,527	27,497	24,317	63.9	9.9
Under 15 years	6,448	2,420	1,339	1,081	2,633	1,125	744	381	270	39.2	18.2
15–19 years	146,800	75,493	45,309	30,184	49,255	17,116	11,112	6,004	4,936	53.2	12.1
15 years	12,432	5,579	3,126	2,453	4,776	1,616	1,105	511	461	46.6	13.5
16 years	20,970	10,247	5,944	4,303	7,475	2,480	1,690	790	768	50.7	12.3
17 years	29,600	15,187	8,993	6,194	10,014	3,400	2,172	1,228	999	53.1	11.9
18 years	38,362	19,918	12,017	7,901	12,635	4,574	2,927	1,647	1,235	53.6	12.3
19 years	45,436	24,562	15,229	9,333	14,355	5,046	3,218	1,828	1,473	55.9	11.5
20–24 years	216,057	128,776	84,037	44,739	58,470	21,411	12,766	8,645	7,400	61.7	10.3
25–29 years	157,960	106,853	75,020	31,833	32,292	12,952	6,492	6,460	5,863	70.3	8.5
30–34 years	100,339	70,308	50,278	20,030	18,427	7,734	3,659	4,075	3,870	72.9	8.0
35–39 years	39,389	26,944	19,032	7,912	7,649	3,118	1,479	1,639	1,678	71.4	8.3
40 years and over	6,640	4,350	2,955	1,395	1,422	568	275	293	300	68.6	9.0

¹Includes races other than white and black.

Table 34. Percent of mothers beginning prenatal care in the first trimester and percent of mothers with late or no prenatal care by race of mother: United States and each State, 1992

[By place of residence]

State	Percent beginning care in 1st trimester			Percent late ¹ or no care		
	All races ²	White	Black	All races ²	White	Black
United States	77.7	80.8	63.9	5.2	4.2	9.9
Alabama	77.1	84.2	63.7	4.7	2.6	8.7
Alaska	83.1	85.8	81.7	3.0	2.2	*
Arizona	71.3	73.0	66.6	8.1	7.5	10.1
Arkansas	72.3	77.0	57.3	6.5	4.7	12.2
California	75.1	74.9	72.3	5.3	5.4	6.3
Colorado	79.0	80.1	67.6	4.9	4.5	8.8
Connecticut	87.5	89.8	72.8	2.6	1.9	7.0
Delaware	80.5	86.7	61.3	4.7	2.6	11.2
District of Columbia	56.9	87.0	52.3	13.9	3.1	16.0
Florida	77.9	82.2	64.4	4.6	3.5	8.0
Georgia	75.8	82.6	64.2	5.4	3.5	8.6
Hawaii	73.6	76.8	65.9	5.7	3.7	4.7
Idaho	76.6	76.8	69.6	5.2	5.1	*
Illinois	78.2	82.6	63.2	5.0	3.7	9.6
Indiana	78.3	80.4	61.7	4.9	4.2	10.4
Iowa	86.2	86.9	72.0	2.4	2.2	5.6
Kansas	83.6	85.0	71.3	3.2	2.8	7.0
Kentucky	80.1	81.6	65.8	4.2	3.7	8.4
Louisiana	76.3	85.5	63.9	5.8	2.7	10.1
Maine	87.3	87.4	80.2	1.8	1.8	*
Maryland	85.0	90.7	72.8	3.7	1.8	7.7
Massachusetts	87.2	89.1	74.4	2.1	1.7	5.2
Michigan	80.8	84.9	65.6	3.7	2.5	8.4
Minnesota	81.8	84.9	52.4	3.5	2.4	13.8
Mississippi	74.9	84.8	64.6	5.0	2.4	7.7
Missouri	80.5	84.0	64.0	4.2	2.9	10.6
Montana	78.2	80.9	81.3	4.2	3.2	*
Nebraska	82.3	83.7	66.4	3.2	2.8	7.9
Nevada	71.5	73.5	54.7	7.8	7.0	13.8
New Hampshire	87.3	87.5	72.8	2.1	2.0	*
New Jersey	81.5	86.1	62.7	4.6	2.8	11.8
New Mexico	61.7	64.6	53.3	9.9	8.6	12.7
New York	74.7	79.9	56.9	6.8	4.8	13.8
North Carolina	79.4	85.8	64.7	4.2	2.4	8.4
North Dakota	82.2	84.4	73.0	2.8	2.0	*
Ohio	82.3	85.3	66.4	3.9	2.7	10.1
Oklahoma	74.6	77.9	58.9	6.4	5.1	12.1
Oregon	78.7	79.3	65.7	4.0	3.8	8.3
Pennsylvania	79.6	84.3	54.8	5.2	3.1	16.9
Rhode Island	88.5	90.4	73.8	2.0	1.5	5.5
South Carolina	71.3	80.8	56.1	6.9	3.9	11.8
South Dakota	79.0	82.3	65.8	5.0	2.8	*
Tennessee	79.6	83.6	67.2	4.0	2.7	7.8
Texas	70.3	71.2	62.8	9.2	8.9	12.1
Utah	85.0	86.0	71.1	2.5	2.1	*
Vermont	84.5	84.7	75.0	2.7	2.6	*
Virginia	81.8	86.6	68.1	3.7	2.4	7.6
Washington	79.8	81.0	68.9	4.0	3.7	7.8
West Virginia	76.7	77.5	55.4	4.2	3.9	13.2
Wisconsin	82.0	85.8	60.2	3.6	2.5	10.7
Wyoming	79.0	79.8	66.2	4.3	3.9	*

¹Care beginning in 3d trimester.²Includes races other than white and black.

Table 35. Live births by month of pregnancy prenatal care began, number of prenatal visits, and median number of visits, by race of mother: United States, 1992

Number of prenatal visits and race of mother	All births	Month of pregnancy prenatal care began							
		1st trimester			2d trimester		Late or no care		Not stated
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	
All races ¹	4,065,014	3,091,543	2,260,718	830,825	679,052	205,914	137,257	68,657	88,505
No visits	68,657	...	...	...	...	...	...	68,657	...
1–2 visits	57,562	11,875	7,038	4,837	15,075	28,116	28,116	...	2,496
3–4 visits	113,048	27,042	14,145	12,897	46,412	37,186	37,186	...	2,408
5–6 visits	226,732	85,814	45,735	40,079	103,601	33,514	33,514	...	3,803
7–8 visits	383,365	213,119	121,750	91,369	147,430	19,231	19,231	...	3,585
9–10 visits	773,103	574,674	364,255	210,419	182,298	9,893	9,893	...	6,238
11–12 visits	1,045,613	937,242	688,353	248,889	99,847	3,479	3,479	...	5,045
13–14 visits	634,613	594,440	480,643	113,797	36,658	1,211	1,211	...	2,304
15–16 visits	419,747	393,234	328,322	64,912	23,891	957	957	...	1,665
17–18 visits	92,312	87,415	72,883	14,532	4,333	147	147	...	417
19 visits or more	133,562	124,052	105,867	18,185	8,244	427	427	...	839
Not stated	116,700	42,636	31,727	10,909	11,263	3,096	3,096	...	59,705
Median number of visits	12.1	12.5	12.8	11.5	9.3	3.3	5.1	...	10.1
White	3,201,678	2,541,435	1,887,486	653,949	471,778	130,561	91,717	38,844	57,904
No visits	38,844	...	...	...	...	...	...	38,844	...
1–2 visits	33,481	6,968	4,232	2,736	7,752	17,512	17,512	...	1,249
3–4 visits	69,309	16,240	8,518	7,722	27,308	24,404	24,404	...	1,357
5–6 visits	152,151	59,055	31,510	27,545	67,973	22,828	22,828	...	2,295
7–8 visits	283,421	163,657	94,649	69,008	103,836	13,529	13,529	...	2,399
9–10 visits	605,692	463,432	297,567	165,865	130,858	6,955	6,955	...	4,447
11–12 visits	871,802	791,381	588,121	203,260	74,010	2,615	2,615	...	3,796
13–14 visits	540,020	509,646	415,823	93,823	27,706	923	923	...	1,745
15–16 visits	344,443	325,592	274,641	50,951	16,935	712	712	...	1,204
17–18 visits	76,845	73,229	61,353	11,876	3,199	108	108	...	309
19 visits or more	108,670	102,111	88,184	13,927	5,663	280	280	...	616
Not stated	77,000	30,124	22,888	7,236	6,538	1,851	1,851	...	38,487
Median number of visits	12.2	12.6	12.8	11.7	9.5	3.7	5.3	...	10.4
Black	673,633	415,144	277,970	137,174	170,148	64,024	36,527	27,497	24,317
No visits	27,497	...	...	...	...	...	...	27,497	...
1–2 visits	20,609	4,267	2,407	1,860	6,457	8,800	8,800	...	1,085
3–4 visits	36,386	9,134	4,778	4,356	16,127	10,238	10,238	...	887
5–6 visits	60,418	21,703	11,590	10,113	28,955	8,492	8,492	...	1,268
7–8 visits	77,967	37,858	20,589	17,269	34,781	4,402	4,402	...	926
9–10 visits	128,203	82,413	48,824	33,589	42,051	2,329	2,329	...	1,410
11–12 visits	128,245	105,691	71,143	34,548	20,938	659	659	...	957
13–14 visits	70,558	62,596	47,170	15,426	7,357	209	209	...	396
15–16 visits	58,424	51,901	40,838	11,063	5,948	212	212	...	363
17–18 visits	11,978	10,916	8,854	2,062	948	28	28	...	86
19 visits or more	20,388	17,791	14,153	3,638	2,293	122	122	...	182
Not stated	32,960	10,874	7,624	3,250	4,293	1,036	1,036	...	16,757
Median number of visits	10.7	12.2	12.6	11.0	8.8	2.0	4.7	...	8.3

¹Includes races other than white and black.

Table 36. Live births with selected obstetric procedures and rates by age of mother, by race of mother: United States, 1992

[Rates are number of live births with specified procedure per 1,000 live births in specified group]

Obstetric procedure and race of mother	All births ¹	Obstetric procedure reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
All races ²	Number		Rate							Number
Amniocentesis	4,065,014	126,433	31.7	11.0	13.3	16.2	29.6	152.4	191.6	82,847
Electronic fetal monitoring	4,065,014	3,076,276	772.5	780.3	776.0	775.6	769.4	753.7	736.8	82,847
Induction of labor	4,065,014	453,093	113.8	97.6	110.0	118.5	118.6	119.0	127.3	82,847
Stimulation of labor	4,065,014	513,161	128.9	128.1	129.4	131.8	128.1	121.9	120.7	82,847
Tocolysis	4,065,014	74,962	18.8	21.6	19.4	17.8	17.9	18.8	17.7	82,847
Ultrasound	4,065,014	2,305,538	579.0	561.3	574.2	584.6	586.1	583.8	571.7	82,847
White										
Amniocentesis	3,201,678	107,788	34.3	11.8	13.9	16.6	30.9	162.3	207.6	62,611
Electronic fetal monitoring	3,201,678	2,439,042	777.0	783.2	780.0	781.0	774.9	758.3	740.7	62,611
Induction of labor	3,201,678	384,968	122.6	108.8	120.1	126.4	125.2	125.6	134.1	62,611
Stimulation of labor	3,201,678	416,908	132.8	134.3	133.9	135.2	131.5	124.8	123.3	62,611
Tocolysis	3,201,678	60,761	19.4	23.3	20.2	18.2	18.2	19.3	18.5	62,611
Ultrasound	3,201,678	1,862,716	593.4	580.0	589.6	597.6	597.8	596.3	584.7	62,611
Black										
Amniocentesis	673,633	11,629	17.7	9.0	11.1	13.8	20.1	82.9	106.4	17,293
Electronic fetal monitoring	673,633	503,787	767.6	779.0	770.8	762.5	758.5	752.9	744.7	17,293
Induction of labor	673,633	52,371	79.8	73.6	76.8	82.2	86.4	90.0	104.2	17,293
Stimulation of labor	673,633	73,998	112.7	114.9	115.2	113.2	106.6	105.3	109.2	17,293
Tocolysis	673,633	10,611	16.2	16.9	16.0	15.9	16.4	15.5	11.5	17,293
Ultrasound	673,633	345,894	527.0	521.5	527.1	528.5	530.7	532.1	530.2	17,293

¹Total number of births to residents of areas reporting specified obstetric procedure.²Includes races other than white and black.

Table 37. Live births with selected complications of labor and/or delivery and rates by age of mother, by race of mother: United States, 1992

[Rates are number of live births with specified complication per 1,000 live births in specified group]

Complication and race of mother	All births ¹	Complication reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
All races ²	Number					Rate				Number
Febrile	4,065,014	53,583	13.6	16.9	14.2	13.2	12.0	11.9	11.7	110,653
Meconium, moderate/heavy	4,065,014	240,705	60.9	65.8	61.6	58.8	58.8	62.7	66.8	110,653
Premature rupture of membrane	4,065,014	126,597	32.0	31.6	30.3	31.1	33.2	36.8	39.9	110,653
Abruptio placenta	4,065,014	23,061	5.8	5.8	5.5	5.6	5.9	7.1	8.4	110,653
Placenta previa	4,065,014	13,966	3.5	1.3	2.2	3.4	5.0	7.1	8.5	110,653
Other excessive bleeding	4,065,014	21,227	5.4	5.0	5.0	5.3	5.6	6.6	7.3	110,653
Seizures during labor	4,065,014	1,504	0.4	0.8	0.4	0.3	0.3	0.4	0.4	110,653
Precipitous labor	4,065,014	76,504	19.3	15.2	18.6	19.2	21.3	22.7	23.6	110,653
Prolonged labor	4,065,014	39,410	10.0	11.0	10.4	9.8	9.2	9.4	11.2	110,653
Dysfunctional labor	4,065,014	116,959	29.6	28.9	29.4	30.2	29.0	29.6	32.9	110,653
Breech/Malpresentation	4,065,014	149,063	37.7	29.5	32.4	38.2	43.1	48.1	53.0	110,653
Cephalopelvic disproportion ^{3,4}	3,588,024	117,118	33.3	31.4	32.2	35.6	33.1	32.5	34.6	74,661
Cord prolapse	4,065,014	9,842	2.5	2.2	2.3	2.4	2.6	3.2	3.1	110,653
Anesthetic complication ⁴	3,744,169	1,613	0.4	0.4	0.4	0.4	0.5	0.6	0.6	80,157
Fetal distress ⁴	3,744,169	153,484	41.9	47.4	42.2	40.2	39.3	43.5	53.6	80,157
White										
Febrile	3,201,678	39,626	12.7	15.3	13.4	12.6	11.4	11.4	11.1	85,619
Meconium, moderate/heavy	3,201,678	175,207	56.2	59.1	56.5	54.7	55.0	59.3	63.8	85,619
Premature rupture of membrane	3,201,678	96,178	30.9	29.9	29.1	29.9	32.0	35.8	40.0	85,619
Abruptio placenta	3,201,678	17,601	5.6	5.8	5.3	5.4	5.7	6.9	8.1	85,619
Placenta previa	3,201,678	10,839	3.5	1.2	2.1	3.3	4.7	6.8	8.0	85,619
Other excessive bleeding	3,201,678	16,489	5.3	5.2	4.9	5.2	5.4	6.3	7.2	85,619
Seizures during labor	3,201,678	1,085	0.3	0.7	0.4	0.3	0.3	0.3	*	85,619
Precipitous labor	3,201,678	57,609	18.5	13.6	16.9	18.4	20.8	22.7	23.3	85,619
Prolonged labor	3,201,678	32,116	10.3	11.8	11.0	10.1	9.3	9.7	11.4	85,619
Dysfunctional labor	3,201,678	95,804	30.7	31.1	31.3	31.1	29.6	30.1	33.6	85,619
Breech/Malpresentation	3,201,678	123,531	39.6	33.0	34.3	39.7	44.2	48.7	53.9	85,619
Cephalopelvic disproportion ^{3,4}	2,795,677	95,401	34.8	33.1	34.6	37.0	33.6	33.1	35.2	55,031
Cord prolapse	3,201,678	7,640	2.5	2.2	2.3	2.3	2.6	3.2	3.2	85,619
Anesthetic complication ⁴	2,931,480	1,272	0.4	0.4	0.4	0.4	0.5	0.6	0.6	59,484
Fetal distress ⁴	2,931,480	114,623	39.9	45.7	40.8	38.3	37.4	41.2	51.0	59,484
Black										
Febrile	673,633	11,090	17.0	20.6	17.1	15.7	14.7	14.3	12.2	21,271
Meconium, moderate/heavy	673,633	55,024	84.3	81.6	81.6	85.1	89.6	92.5	91.6	21,271
Premature rupture of membrane	673,633	24,680	37.8	34.9	35.0	38.5	43.5	46.8	43.0	21,271
Abruptio placenta	673,633	4,546	7.0	5.9	6.5	7.2	8.2	9.3	10.4	21,271
Placenta previa	673,633	2,301	3.5	1.5	2.5	3.9	6.4	7.5	9.0	21,271
Other excessive bleeding	673,633	2,761	4.2	3.6	4.0	4.2	5.2	5.6	4.7	21,271
Seizures during labor	673,633	367	0.6	1.0	0.5	0.4	0.4	0.5	*	21,271
Precipitous labor	673,633	14,421	22.1	18.0	23.2	23.1	24.1	22.9	21.2	21,271
Prolonged labor	673,633	5,077	7.8	8.6	7.5	7.6	7.6	6.9	8.6	21,271
Dysfunctional labor	673,633	16,366	25.1	24.7	23.6	26.2	26.1	26.8	29.3	21,271
Breech/Malpresentation	673,633	19,068	29.2	21.9	25.5	30.5	38.5	45.5	51.1	21,271
Cephalopelvic disproportion ^{3,4}	613,955	15,887	26.6	28.4	24.6	27.6	27.2	25.5	26.0	16,734
Cord prolapse	673,633	1,774	2.7	2.3	2.5	2.8	3.4	3.2	3.3	21,271
Anesthetic complication ⁴	630,617	269	0.4	0.4	0.4	0.5	0.5	0.6	*	17,655
Fetal distress ⁴	630,617	32,645	53.3	52.5	49.0	54.2	56.7	62.2	77.6	17,655

¹Total number of births to residents of areas reporting specified complication.²Includes races other than white and black.³New York City (but not New York State) reports this complication.⁴Texas does not report this complication.

Table 38. Live births by attendant, place of delivery, and race of mother: United States, 1992

Place of delivery and race of mother	All births	Attendant							
		Physician			Midwife			Other	Unspecified
		Total	Doctor of medicine	Doctor of osteopathy	Total	Certified nurse midwife	Other midwife		
All races ¹									
Total	4,065,014	3,834,502	3,697,967	136,535	199,195	185,005	14,190	27,161	4,156
In hospital ²	4,021,608	3,824,176	3,688,870	135,306	178,537	176,117	2,420	15,615	3,280
Not in hospital	43,017	10,214	8,996	1,218	20,645	8,878	11,767	11,512	646
Freestanding birthing center	13,255	4,032	3,413	619	8,900	5,715	3,185	315	8
Clinic or doctor's office	900	489	373	116	227	142	85	165	19
Residence	25,923	4,600	4,153	447	11,022	2,928	8,094	9,782	519
Other	2,939	1,093	1,057	36	496	93	403	1,250	100
Not specified	389	112	101	11	13	10	3	34	230
White									
Total	3,201,678	3,027,509	2,913,244	114,265	150,300	136,934	13,366	20,924	2,945
In hospital ²	3,165,195	3,020,255	2,907,141	113,114	130,557	128,672	1,885	12,058	2,325
Not in hospital	36,182	7,171	6,030	1,141	19,735	8,255	11,480	8,849	427
Freestanding birthing center	12,448	3,728	3,115	613	8,418	5,297	3,121	299	3
Clinic or doctor's office	733	391	277	114	210	132	78	120	12
Residence	21,155	2,536	2,149	387	10,639	2,757	7,882	7,635	345
Other	1,846	516	489	27	468	69	399	795	67
Not specified	301	83	73	10	8	7	1	17	193
Black									
Total	673,633	631,740	613,482	18,258	36,131	35,581	550	4,731	1,031
In hospital ²	668,303	629,106	610,916	18,190	35,601	35,176	425	2,732	864
Not in hospital	5,257	2,612	2,545	67	527	403	124	1,983	135
Freestanding birthing center	452	133	130	3	308	273	35	7	4
Clinic or doctor's office	80	60	59	1	5	5	—	8	7
Residence	3,839	1,912	1,858	54	195	106	89	1,630	102
Other	886	507	498	9	19	19	—	338	22
Not specified	73	22	21	1	3	2	1	16	32

¹Includes races other than white and black.²Includes births occurring en route to or on arrival at hospital.

Table 39. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by age and race of mother: United States, 1992

Age and race of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean ³
	All births	Vaginal		Cesarean			Not stated	Total ¹	Primary ²	
		Total	After previous cesarean	Total	Primary	Repeat				
All races ⁴	4,065,014	3,100,710	97,549	888,622	554,662	333,960	75,682	22.3	15.6	22.6
Under 20 years	517,635	425,831	4,144	81,684	70,079	11,605	10,120	16.1	14.3	26.3
20–24 years	1,070,490	845,242	20,884	205,142	139,034	66,108	20,106	19.5	14.4	24.0
25–29 years	1,179,264	893,312	30,937	264,389	160,566	103,823	21,563	22.8	15.7	23.0
30–34 years	895,271	656,455	28,884	222,316	121,468	100,848	16,500	25.3	16.2	22.3
35–39 years	344,644	241,179	11,215	97,126	52,745	44,381	6,339	28.7	18.7	20.2
40–49 years	57,710	38,691	1,485	17,965	10,770	7,195	1,054	31.7	22.4	17.1
White	3,201,678	2,434,959	77,977	705,841	437,398	268,443	60,878	22.5	15.7	22.5
Under 20 years	348,106	285,976	2,311	54,931	47,992	6,939	7,199	16.1	14.5	25.0
20–24 years	814,422	641,411	15,045	157,357	108,225	49,132	15,654	19.7	14.7	23.4
25–29 years	964,586	730,143	25,248	216,583	131,322	85,261	17,860	22.9	15.7	22.8
30–34 years	745,510	547,531	24,579	184,000	99,312	84,688	13,979	25.2	16.0	22.5
35–39 years	282,617	198,666	9,554	78,646	42,087	36,559	5,305	28.4	18.2	20.7
40–49 years	46,437	31,232	1,240	14,324	8,460	5,864	881	31.4	22.0	17.5
Black	673,633	514,929	15,382	146,480	93,165	53,315	12,224	22.1	15.7	22.4
Under 20 years	153,248	125,665	1,713	24,918	20,489	4,429	2,665	16.5	14.2	27.9
20–24 years	216,057	170,062	5,130	42,108	26,646	15,462	3,887	19.8	13.9	24.9
25–29 years	157,960	117,430	4,524	37,583	21,996	15,587	2,947	24.2	16.3	22.5
30–34 years	100,339	71,045	2,893	27,432	15,466	11,966	1,862	27.9	18.5	19.5
35–39 years	39,389	26,465	974	12,190	7,112	5,078	734	31.5	21.8	16.1
40–49 years	6,640	4,262	148	2,249	1,456	793	129	34.5	26.1	15.7

¹Percent of all live births by cesarean delivery.²Number of primary cesareans per 100 live births to women who have not had a previous cesarean.³Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁴Includes races other than white and black.

Table 40. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by age and race of mother: United States, 1989–92

Year and race of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean ³
	All births	Vaginal		Cesarean			Not stated	Total ¹	Primary ²	
		Total	After previous cesarean	Total	Primary	Repeat				
All races ⁴										
1992	4,065,014	3,100,710	97,549	888,622	554,662	333,960	75,682	22.3	15.6	22.6
1991	4,110,907	3,100,891	90,690	905,077	569,195	335,882	104,939	22.6	15.9	21.3
1990 ⁵	4,110,563	3,111,421	84,299	914,096	575,066	339,030	85,046	22.7	16.0	19.9
1989 ⁶	3,798,734	2,793,463	71,019	826,955	521,873	305,082	178,316	22.8	16.1	18.9
White										
1992	3,201,678	2,434,959	77,977	705,841	437,398	268,443	60,878	22.5	15.7	22.5
1991	3,241,273	2,434,900	72,564	723,088	452,534	270,554	83,285	22.9	16.1	21.1
1990 ⁵	3,252,473	2,453,857	67,191	732,713	458,656	274,057	65,903	23.0	16.1	19.7
1989 ⁶	3,022,537	2,212,843	56,851	667,114	418,177	248,937	142,580	22.8	16.1	18.9
Black										
1992	673,633	514,929	15,382	146,480	93,165	53,315	12,224	22.1	15.7	22.4
1991	682,602	519,047	14,213	145,583	92,645	52,938	17,972	21.9	15.5	21.2
1990 ⁵	679,236	516,581	13,496	146,472	93,476	52,996	16,183	22.1	15.7	20.3
1989 ⁶	611,147	452,291	11,104	127,907	82,695	45,212	30,319	22.0	15.8	19.7

¹Percent of all live births by cesarean delivery.²Number of primary cesareans per 100 live births to women who have not had a previous cesarean.³Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁴Includes races other than white and black.⁵Excludes Oklahoma, which did not require reporting of method of delivery.⁶Excludes Louisiana, Maryland, Nebraska, Nevada, and Oklahoma, which did not require reporting of method of delivery.

Table 41. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by selected medical risk factors, complications of labor and/or delivery, and obstetric procedures: United States, 1992

Medical risk factor, complication, and obstetric procedure	All births with specified condition and/or procedure	Cesarean delivery rate		Rate of vaginal birth after previous cesarean ³
		Total ¹	Primary ²	
Medical risk factors				
Anemia	71,942	24.7	17.1	23.0
Cardiac disease	15,544	25.4	18.2	24.6
Acute or chronic lung disease	16,593	26.8	19.2	24.8
Diabetes.	102,253	35.8	25.9	17.6
Genital herpes ^{4,5}	28,747	42.6	36.8	24.8
Hydramnios/Oligohydramnios ⁴	29,860	41.7	36.4	19.0
Hemoglobinopathy ⁴	2,160	27.9	21.5	25.7
Hypertension, chronic.	25,964	40.2	31.3	15.8
Hypertension, pregnancy-associated	112,419	40.0	35.2	16.5
Eclampsia.	14,369	51.0	46.9	12.7
Incompetent cervix ⁴	8,516	30.7	23.2	25.3
Renal disease	8,933	27.2	20.1	21.2
Rh sensitization ⁶	24,832	23.7	16.5	25.1
Uterine bleeding ⁵	29,159	32.2	25.1	22.2
Complications of labor and/or delivery				
Febrile	53,583	33.7	31.5	42.9
Meconium, moderate/heavy	240,705	22.2	19.2	42.5
Premature rupture of membrane	126,597	28.0	24.6	33.4
Abruptio placenta	23,061	58.2	53.9	15.8
Placenta previa	13,966	81.7	77.6	3.7
Other excessive bleeding	21,227	32.9	26.0	25.4
Seizures during labor.	1,504	51.1	48.6	*
Precipitous labor (less than 3 hours)	76,504	1.8	1.3	83.8
Prolonged labor (more than 20 hours)	39,410	37.6	36.1	42.2
Dysfunctional labor	116,959	67.4	65.5	16.3
Breech/Malpresentation	149,063	85.0	83.5	4.6
Cephalopelvic disproportion ^{7,8}	117,118	97.8	97.5	1.0
Cord prolapse	9,842	64.6	62.2	12.4
Anesthetic complications ⁸	1,613	53.5	43.9	11.3
Fetal distress ⁸	153,484	60.7	58.5	19.4
Obstetric procedures				
Amniocentesis	126,433	35.6	24.7	18.0
Electronic fetal monitoring	3,076,276	21.6	15.7	26.9
Induction of labor	453,093	20.2	18.6	54.2
Stimulation of labor	513,161	15.9	14.5	61.9
Tocolysis	74,962	28.9	23.4	25.6
Ultrasound	2,305,538	24.5	17.3	22.4

¹Percent of all live births by cesarean delivery.²Number of primary cesareans per 100 live births to women who have not had a previous cesarean.³Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁴New York City (but not New York State) reports this risk factor.⁵Texas does not report this risk factor.⁶Kansas does not report this risk factor.⁷New York City (but not New York State) reports this complication.⁸Texas does not report this complication.

Table 42. Live births by birthweight and percent very low and low birthweight, by period of gestation and race of mother: United States, 1992

Birthweight ¹ and race of mother	Period of gestation ²											
	Preterm						Term				Postterm	
	All births	Total, under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total, 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	Not stated
Number												
All races ³	4,065,014	430,239	28,514	48,250	202,991	150,484	3,176,108	1,706,356	918,548	551,204	418,021	40,646
Less than 500 grams	5,437	5,235	5,015	204	15	1	13	7	3	3	2	187
500–999 grams	20,516	19,794	14,878	4,262	622	32	239	149	54	36	25	458
1,000–1,499 grams	26,475	24,190	4,159	13,425	6,028	578	1,544	1,136	259	149	268	473
1,500–1,999 grams	55,306	43,907	1,340	10,918	27,106	4,543	9,587	7,719	1,229	639	1,050	762
2,000–2,499 grams	179,759	85,176	946	4,960	54,250	25,020	85,179	66,595	12,325	6,259	7,170	2,234
2,500–2,999 grams	654,760	112,261	1,421	5,428	51,468	53,944	488,616	341,299	98,960	48,357	47,049	6,834
3,000–3,499 grams	1,490,769	90,828	–	6,024	40,259	44,545	1,239,288	708,781	344,550	185,957	146,948	13,705
3,500–3,999 grams	1,191,796	38,432	–	2,910	18,254	17,268	994,540	450,475	333,352	210,713	148,381	10,443
4,000–4,499 grams	365,543	7,918	–	–	4,116	3,802	299,835	110,647	107,579	81,609	54,545	3,245
4,500–4,999 grams	62,573	1,142	–	–	600	542	49,951	16,648	17,850	15,453	10,932	548
5,000 grams or more	7,597	210	–	–	99	111	5,861	2,140	1,976	1,745	1,405	121
Not stated	4,483	1,146	755	119	174	98	1,455	760	411	284	246	1,636
Percent												
Very low birthweight ⁴	1.3	11.5	86.6	37.2	3.3	0.4	0.1	0.1	0.0	0.0	0.1	2.9
Low birthweight ⁵	7.1	41.6	94.9	70.2	43.4	20.1	3.0	4.4	1.5	1.3	2.0	10.5
Number												
White	3,201,678	288,718	15,184	29,102	135,643	108,789	2,546,260	1,335,455	751,652	459,153	336,680	30,020
Less than 500 grams	2,903	2,790	2,681	105	4	–	6	3	2	1	2	105
500–999 grams	11,599	11,175	8,155	2,617	388	15	163	101	35	27	14	247
1,000–1,499 grams	16,287	14,881	2,249	8,395	3,878	359	969	714	160	95	158	279
1,500–1,999 grams	35,795	28,449	603	6,983	17,770	3,093	6,248	5,069	785	394	653	445
2,000–2,499 grams	119,078	57,026	418	2,621	36,934	17,053	56,155	44,184	7,985	3,986	4,539	1,358
2,500–2,999 grams	459,142	76,220	689	2,788	34,143	38,600	345,770	240,640	70,390	34,740	32,629	4,523
3,000–3,499 grams	1,160,043	62,335	–	3,557	25,890	32,888	973,680	552,106	272,740	148,834	113,871	10,157
3,500–3,999 grams	1,007,943	27,935	–	1,968	12,827	13,140	846,271	379,023	285,405	181,843	125,294	8,443
4,000–4,499 grams	323,182	6,206	–	–	3,161	3,045	265,970	96,653	96,029	73,288	48,234	2,772
4,500–4,999 grams	55,933	898	–	–	460	438	44,746	14,582	16,042	14,122	9,826	463
5,000 grams or more	6,620	164	–	–	74	90	5,094	1,774	1,734	1,586	1,267	95
Not stated	3,153	639	389	68	114	68	1,188	606	345	237	193	1,133
Percent												
Very low birthweight ⁴	1.0	10.0	88.4	38.3	3.2	0.3	0.0	0.1	0.0	0.0	0.1	2.2
Low birthweight ⁵	5.8	39.7	95.3	71.4	43.5	18.9	2.5	3.8	1.2	1.0	1.6	8.4
Number												
Black	673,633	122,455	12,484	17,312	58,059	34,600	479,286	283,799	125,278	70,209	64,427	7,465
Less than 500 grams	2,382	2,303	2,204	87	11	1	7	4	1	2	–	72
500–999 grams	8,291	8,043	6,301	1,515	213	14	66	45	17	4	6	176
1,000–1,499 grams	9,222	8,458	1,776	4,575	1,927	180	497	376	76	45	106	161
1,500–1,999 grams	17,365	13,794	693	3,585	8,261	1,255	2,958	2,346	399	213	357	256
2,000–2,499 grams	52,257	24,758	491	2,149	15,279	6,839	24,485	18,831	3,670	1,984	2,329	685
2,500–2,999 grams	157,560	30,842	670	2,378	14,979	12,815	112,897	79,331	22,510	11,056	12,106	1,715
3,000–3,499 grams	253,261	23,724	–	2,153	12,053	9,518	200,718	118,266	54,000	28,452	26,431	2,388
3,500–3,999 grams	136,237	8,500	–	822	4,425	3,253	108,920	52,664	34,893	21,363	17,575	1,242
4,000–4,499 grams	30,514	1,336	–	–	737	599	24,311	10,072	8,235	6,004	4,580	287
4,500–4,999 grams	4,719	190	–	–	106	84	3,678	1,483	1,249	946	800	51
5,000 grams or more	683	36	–	–	19	17	544	262	177	105	89	14
Not stated	1,142	471	349	48	49	25	205	119	51	35	48	418
Percent												
Very low birthweight ⁴	3.0	15.4	84.7	35.8	3.7	0.6	0.1	0.1	0.1	0.1	0.2	5.8
Low birthweight ⁵	13.3	47.0	94.5	69.0	44.3	24.0	5.8	7.6	3.3	3.2	4.3	19.2

¹Equivalents of the gram weights in pounds and ounces are shown in the Technical notes.²Expressed in completed weeks.³Includes races other than white and black.⁴Less than 1,500 grams.⁵Less than 2,500 grams.

Table 43. Percent of live births preterm and percent of live births of low birthweight by race of mother: United States, 1981–92

Year	Preterm ¹			Low birthweight ³		
	All races ²	White	Black	All races ²	White	Black
1992	10.7	9.1	18.4	7.1	5.8	13.3
1991	10.8	9.1	18.9	7.1	5.8	13.6
1990	10.6	8.9	18.8	7.0	5.7	13.3
1989	10.6	8.8	18.9	7.0	5.7	13.5
1988	10.2	8.5	18.7	6.9	5.7	13.3
1987	10.2	8.5	18.4	6.9	5.7	13.0
1986	10.0	8.4	18.0	6.8	5.7	12.8
1985	9.8	8.2	17.8	6.8	5.7	12.6
1984 ⁴	9.4	7.9	17.1	6.7	5.6	12.6
1983 ⁴	9.6	8.0	17.7	6.8	5.7	12.8
1982 ⁴	9.5	8.0	17.4	6.8	5.6	12.6
1981 ⁴	9.4	7.9	17.3	6.8	5.7	12.7

¹Births of less than 37 completed weeks gestation.²Includes races other than white and black.³Less than 2,500 grams.⁴Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see Technical notes.

Table 44. Number and percent low birthweight and number of live births by birthweight, by age and race of mother: United States, 1992

Age and race of mother	Birthweight ²														
	Low birthweight ¹		Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000 grams or more	Not stated
	Number	Percent													
All races ³															
All ages	287,493	7.1	4,065,014	5,437	20,516	26,475	55,306	179,759	654,760	1,490,769	1,191,796	365,543	62,573	7,597	4,483
Under 15 years	1,608	13.2	12,220	27	154	201	302	924	3,044	4,795	2,318	384	40	–	31
15–19 years	46,707	9.3	505,415	896	3,546	4,451	8,912	28,902	104,993	200,179	121,407	27,549	3,620	386	574
15 years	3,382	11.6	29,267	66	326	364	659	1,967	6,779	11,627	6,116	1,191	126	15	31
16 years	6,278	10.5	60,136	116	524	669	1,129	3,840	13,331	24,039	13,355	2,705	323	31	74
17 years	9,309	9.5	98,146	184	704	864	1,818	5,739	20,828	39,074	23,015	5,067	674	52	127
18 years	12,509	9.0	138,663	247	946	1,141	2,378	7,797	28,595	55,039	33,523	7,756	972	115	154
19 years	15,229	8.5	179,203	283	1,046	1,413	2,928	9,559	35,460	70,400	45,398	10,830	1,525	173	188
20–24 years	76,290	7.1	1,070,490	1,355	5,319	6,934	14,073	48,609	186,813	410,130	299,045	82,793	12,786	1,457	1,176
25–29 years	73,223	6.2	1,179,264	1,442	5,052	6,405	13,849	46,475	175,506	428,566	363,814	114,974	19,550	2,421	1,210
30–34 years	58,428	6.5	895,271	1,105	4,229	5,415	11,657	36,022	125,653	311,808	282,607	95,980	17,695	2,138	962
35–39 years	26,343	7.7	344,644	518	1,859	2,556	5,481	15,929	49,993	116,181	105,730	37,489	7,494	982	432
40–44 years	4,688	8.4	55,702	92	337	484	994	2,781	8,443	18,441	16,313	6,186	1,334	204	93
45–49 years	206	10.3	2,008	2	20	29	38	117	315	669	562	188	54	9	5
White															
All ages	185,662	5.8	3,201,678	2,903	11,599	16,287	35,795	119,078	459,142	1,160,043	1,007,943	323,182	55,933	6,620	3,153
Under 15 years	548	10.2	5,367	10	43	64	109	322	1,137	2,169	1,247	223	28	–	15
15–19 years	26,061	7.6	342,739	391	1,798	2,400	4,971	16,501	63,273	135,638	91,738	22,365	2,999	306	359
15 years	1,468	9.2	15,966	26	138	154	298	852	3,190	6,353	3,951	882	95	12	15
16 years	3,179	8.5	37,256	44	260	343	572	1,960	7,252	15,006	9,394	2,108	251	25	41
17 years	5,187	7.9	65,564	88	344	493	1,012	3,250	12,369	26,033	17,258	4,060	542	39	76
18 years	7,151	7.5	95,949	102	512	606	1,354	4,577	17,681	38,129	25,694	6,301	805	89	99
19 years	9,076	7.1	128,004	131	544	804	1,735	5,862	22,781	50,117	35,441	9,014	1,306	141	128
20–24 years	47,398	5.8	814,422	686	2,841	4,022	8,711	31,138	127,211	309,555	245,575	71,480	11,212	1,240	751
25–29 years	49,242	5.1	964,586	767	2,909	4,089	9,321	32,156	128,933	346,912	315,577	103,237	17,663	2,134	888
30–34 years	40,643	5.5	745,510	649	2,573	3,635	8,126	25,660	94,747	256,614	248,016	86,821	16,058	1,886	725
35–39 years	18,329	6.5	282,617	337	1,191	1,722	3,817	11,262	37,387	93,979	91,499	33,456	6,763	866	338
40–44 years	3,281	7.3	44,866	62	229	331	712	1,947	6,224	14,663	13,844	5,439	1,162	180	73
45–49 years	160	10.2	1,571	1	15	24	28	92	230	513	447	161	48	8	4

See footnotes at end of table.

Table 44. Number and percent low birthweight and number of live births by birthweight, by age and race of mother: United States, 1992—Con.

Age and race of mother	Birthweight ²														
	Low birthweight ¹		Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000 grams or more	Not stated
	Number	Percent													
Black															
All ages	89,517	13.3	673,633	2,382	8,291	9,222	17,365	52,257	157,560	253,261	136,237	30,514	4,719	683	1,142
Under 15 years	1,021	15.9	6,448	16	107	135	183	580	1,797	2,458	1,004	143	10	–	15
15–19 years	19,403	13.2	146,800	491	1,676	1,939	3,716	11,581	38,170	58,170	25,958	4,337	500	68	194
15 years	1,838	14.8	12,432	40	181	200	349	1,068	3,369	4,929	1,983	270	26	3	14
16 years	2,933	14.0	20,970	71	253	307	531	1,771	5,647	8,277	3,512	499	63	6	33
17 years	3,874	13.1	29,600	93	346	354	755	2,326	7,822	11,831	5,070	839	104	12	48
18 years	5,047	13.2	38,362	142	412	506	969	3,018	9,923	15,144	6,836	1,208	133	21	50
19 years	5,711	12.6	45,436	145	484	572	1,112	3,398	11,409	17,989	8,557	1,521	174	26	49
20–24 years	26,264	12.2	216,057	642	2,377	2,712	4,934	15,599	51,209	84,167	43,735	8,940	1,193	164	385
25–29 years	20,647	13.1	157,960	636	1,956	2,092	3,966	11,997	35,178	58,090	34,047	8,216	1,313	202	267
30–34 years	14,760	14.7	100,339	421	1,516	1,548	2,992	8,283	21,494	34,933	21,672	5,995	1,131	157	197
35–39 years	6,359	16.2	39,389	156	568	682	1,355	3,598	8,289	13,260	8,430	2,437	466	77	71
40–44 years	1,033	16.0	6,453	20	87	112	213	601	1,378	2,122	1,356	433	105	14	12
45–49 years	30	16.1	187	–	4	2	6	18	45	61	35	13	1	1	1

¹Less than 2,500 grams.²Equivalents of gram weights in terms of pounds and ounces are shown in Technical notes.³Includes races other than white and black.

Table 45. Live births with selected abnormal conditions of the newborn and rates by age of mother, by race of mother: United States, 1992

[Rates are number of live births with specified abnormal condition per 1,000 live births in specified group]

Abnormal condition and race of mother	All births ¹	Abnormal condition reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
All races ²	Number					Rate				Number
Anemia	4,065,014	4,645	1.2	1.4	1.3	1.1	1.1	1.1	1.3	141,285
Birth injury ³	3,633,541	7,451	2.1	2.2	2.2	2.2	1.9	1.9	1.6	107,048
Fetal alcohol syndrome ^{4,5}	3,838,199	460	0.1	0.1	0.1	0.1	0.1	0.2	*	136,859
Hyaline membrane disease/RDS	4,065,014	24,755	6.3	7.8	6.7	5.8	5.7	5.9	6.7	141,285
Meconium aspiration syndrome ⁵	3,908,869	9,757	2.6	2.7	2.5	2.5	2.6	3.0	3.1	135,856
Assisted ventilation less than 30 minutes ⁶	3,777,127	54,838	15.1	16.4	15.1	14.6	14.6	15.4	16.3	133,522
Assisted ventilation 30 minutes or longer ⁶	3,777,127	28,409	7.8	9.8	7.9	7.2	7.1	8.2	9.7	133,522
Seizures	4,065,014	2,787	0.7	0.8	0.7	0.7	0.7	0.8	0.9	141,285
White										
Anemia	3,201,678	3,406	1.1	1.3	1.2	1.1	1.0	1.0	1.4	111,120
Birth injury ³	2,834,936	6,428	2.3	2.6	2.5	2.4	2.1	2.0	1.9	81,941
Fetal alcohol syndrome ^{4,5}	3,005,186	256	0.1	0.1	0.1	0.1	0.1	0.1	*	107,693
Hyaline membrane disease/RDS	3,201,678	19,550	6.3	8.0	6.8	5.9	5.7	6.0	6.8	111,120
Meconium aspiration syndrome ⁵	3,065,875	7,222	2.4	2.6	2.3	2.3	2.5	2.8	3.1	106,719
Assisted ventilation less than 30 minutes ⁶	2,989,099	43,711	15.2	16.8	15.3	14.7	14.7	15.4	16.8	106,228
Assisted ventilation 30 minutes or longer ⁶	2,989,099	21,442	7.4	9.6	7.6	6.8	6.7	7.9	9.6	106,228
Seizures	3,201,678	2,136	0.7	0.8	0.7	0.7	0.7	0.8	0.9	111,120
Black										
Anemia	673,633	1,036	1.6	1.6	1.7	1.3	1.7	1.9	*	25,120
Birth injury ³	620,658	720	1.2	1.3	1.2	1.3	1.1	1.1	*	20,843
Fetal alcohol syndrome ^{4,5}	649,664	156	0.2	*	0.2	0.4	0.4	*	*	24,263
Hyaline membrane disease/RDS	673,633	4,637	7.2	7.8	7.0	6.5	7.5	7.2	8.2	25,120
Meconium aspiration syndrome ⁵	656,971	2,085	3.3	3.0	2.9	3.4	3.8	4.7	3.9	24,238
Assisted ventilation less than 30 minutes ⁶	612,643	8,908	15.1	15.2	14.4	14.9	16.0	16.9	17.8	22,677
Assisted ventilation 30 minutes or longer ⁶	612,643	6,001	10.2	10.3	9.5	10.1	11.1	11.5	11.4	22,677
Seizures	673,633	548	0.8	0.8	1.0	0.7	0.8	1.0	*	25,120

¹Total number of births to residents of areas reporting specified condition.²Includes races other than white and black.³Massachusetts, Nebraska, and Texas do not report this condition.⁴Wisconsin does not report this condition.⁵New York City (but not New York State) reports this condition.⁶New York State and New York City do not report this condition.

Table 46. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 48 reporting States and the District of Columbia, 1992

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births ¹	Congenital anomaly reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
All races ²	Number						Rate			Number
Anencephalus	3,749,205	479	13.2	15.5	14.6	11.8	12.7	10.0	*	131,973
Spina bifida/Meningocele	3,749,205	823	22.8	23.8	27.1	20.7	20.8	19.7	*	131,973
Hydrocephalus	3,749,205	956	26.4	29.4	29.6	24.7	22.8	22.3	54.5	131,973
Microcephalus	3,749,205	306	8.5	12.8	7.3	8.0	7.9	7.7	*	131,973
Other central nervous system anomalies	3,749,205	852	23.6	22.3	22.4	23.6	25.0	23.0	*	131,973
Heart malformations	3,749,205	4,343	120.1	103.4	118.8	116.7	120.2	149.8	193.7	131,973
Other circulatory/respiratory anomalies.	3,749,205	4,734	130.9	140.0	129.4	123.3	129.9	140.7	189.7	131,973
Rectal atresia/stenosis.	3,749,205	379	10.5	9.8	11.4	10.3	8.9	13.3	*	131,973
Tracheo-esophageal fistula/Esophageal atresia	3,749,205	509	14.1	13.4	12.0	14.0	15.0	17.3	*	131,973
Omphalocele/Gastroschisis	3,749,205	870	24.1	48.3	30.1	18.3	14.4	13.0	*	131,973
Other gastrointestinal anomalies	3,749,205	1,118	30.9	34.9	32.9	28.8	29.7	28.0	*	131,973
Malformed genitalia	3,749,205	2,669	73.8	68.1	70.8	74.0	79.4	78.7	64.6	131,973
Renal agenesis	3,749,205	398	11.0	13.0	10.2	10.6	11.6	10.3	*	131,973
Other urogenital anomalies	3,749,205	4,135	114.3	101.5	111.8	114.5	116.6	131.7	139.2	131,973
Cleft lip/palate	3,749,205	3,089	85.4	83.4	85.5	85.6	82.3	93.4	98.9	131,973
Polydactyly/Syndactyly/Adactyly	3,749,205	3,033	83.8	120.0	92.7	76.9	66.9	65.0	96.8	131,973
Club foot	3,749,205	2,074	57.3	63.2	63.3	53.7	51.1	57.7	58.5	131,973
Diaphragmatic hernia	3,749,205	448	12.4	11.1	10.9	12.4	13.0	16.0	*	131,973
Other musculoskeletal/integumental anomalies.	3,749,205	6,779	187.4	185.3	177.8	184.2	194.2	208.1	228.0	131,973
Down's syndrome.	3,749,205	1,811	50.1	28.9	36.1	35.5	56.0	115.1	343.0	131,973
Other chromosomal anomalies.	3,749,205	1,523	42.1	42.1	38.7	36.6	37.0	67.7	151.3	131,973
White										
Anencephalus	2,965,940	393	13.7	17.4	15.0	12.0	13.1	11.3	*	104,463
Spina bifida/Meningocele	2,965,940	688	24.0	27.2	29.1	21.8	21.9	19.4	*	104,463
Hydrocephalus	2,965,940	789	27.6	30.7	31.6	24.6	24.6	23.8	64.8	104,463
Microcephalus	2,965,940	227	7.9	13.0	6.9	7.7	7.1	*	*	104,463
Other central nervous system anomalies	2,965,940	694	24.3	25.0	23.6	23.2	25.4	23.4	*	104,463
Heart malformations	2,965,940	3,551	124.1	107.1	124.6	118.5	124.4	152.0	192.1	104,463
Other circulatory/respiratory anomalies.	2,965,940	3,912	136.7	158.6	138.1	127.9	131.2	139.8	197.0	104,463
Rectal atresia/stenosis.	2,965,940	316	11.0	9.5	12.3	11.1	9.3	13.7	*	104,463
Tracheo-esophageal fistula/Esophageal atresia	2,965,940	435	15.2	15.8	14.1	14.9	15.1	17.0	*	104,463
Omphalocele/Gastroschisis	2,965,940	674	23.6	55.6	30.1	17.5	13.1	13.3	*	104,463
Other gastrointestinal anomalies	2,965,940	876	30.6	37.6	31.6	28.0	30.3	27.1	*	104,463
Malformed genitalia	2,965,940	2,260	79.0	79.0	76.0	77.9	82.7	84.9	59.9	104,463
Renal agenesis	2,965,940	353	12.3	16.7	11.4	11.6	12.8	10.9	*	104,463
Other urogenital anomalies	2,965,940	3,610	126.2	119.1	123.7	124.1	127.3	143.5	147.2	104,463
Cleft lip/palate	2,965,940	2,707	94.6	104.0	97.6	93.4	88.5	93.8	94.8	104,463
Polydactyly/Syndactyly/Adactyly	2,965,940	1,682	58.8	70.8	58.4	58.6	54.4	55.8	64.8	104,463
Club foot	2,965,940	1,826	63.8	74.0	72.3	58.3	57.3	62.2	62.4	104,463
Diaphragmatic hernia	2,965,940	372	13.0	12.3	10.7	12.9	14.1	16.2	*	104,463
Other musculoskeletal/integumental anomalies.	2,965,940	5,515	192.7	191.8	178.9	188.4	201.8	220.3	229.5	104,463
Down's syndrome.	2,965,940	1,567	54.8	33.8	39.5	38.8	60.2	118.8	359.2	104,463
Other chromosomal anomalies.	2,965,940	1,262	44.1	45.5	40.9	39.0	38.6	67.5	147.2	104,463

See footnotes at end of table.

Table 46. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 48 reporting States and the District of Columbia, 1992—Con.

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births ¹	Congenital anomaly reported	Age of mother							Not stated
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–49 years	
Black	Number						Rate			Number
Anencephalus	612,130	64	10.9	*	10.9	*	*	*	*	22,620
Spina bifida/Meningocele	612,130	103	17.5	16.6	21.3	*	*	*	*	22,620
Hydrocephalus	612,130	130	22.1	23.0	23.4	25.1	*	*	*	22,620
Microcephalus	612,130	71	12.0	*	10.4	*	*	*	*	22,620
Other central nervous system anomalies	612,130	129	21.9	17.3	20.2	28.8	*	*	*	22,620
Heart malformations	612,130	634	107.5	97.9	101.2	113.6	101.9	162.4	*	22,620
Other circulatory/respiratory anomalies.	612,130	597	101.3	96.5	96.5	103.3	112.6	104.2	*	22,620
Rectal atresia/stenosis.	612,130	49	8.3	*	*	*	*	*	*	22,620
Tracheo-esophageal fistula/Esophageal atresia	612,130	52	8.8	*	*	*	*	*	*	22,620
Omphalocele/Gastroschisis	612,130	169	28.7	33.1	30.1	27.3	26.1	*	*	22,620
Other gastrointestinal anomalies	612,130	191	32.4	27.4	36.8	31.7	30.8	*	*	22,620
Malformed genitalia	612,130	312	52.9	46.1	53.4	52.4	65.2	*	*	22,620
Renal agenesis	612,130	33	5.6	*	*	*	*	*	*	22,620
Other urogenital anomalies	612,130	371	62.9	61.2	63.3	62.0	60.4	64.4	*	22,620
Cleft lip/palate	612,130	221	37.5	36.7	37.9	33.2	32.0	70.5	*	22,620
Polydactyly/Syndactyly/Adactyly	612,130	1,281	217.3	240.4	230.4	207.3	187.3	137.9	*	22,620
Club foot	612,130	198	33.6	41.0	34.8	36.2	*	*	*	22,620
Diaphragmatic hernia	612,130	61	10.3	*	11.4	*	*	*	*	22,620
Other musculoskeletal/integumental anomalies.	612,130	882	149.6	152.6	158.8	138.0	152.9	119.5	*	22,620
Down's syndrome.	612,130	167	28.3	16.6	22.8	18.4	33.2	95.0	*	22,620
Other chromosomal anomalies.	612,130	183	31.0	27.4	27.0	27.3	27.3	67.4	*	22,620

¹Total number of births to residents of areas reporting specified congenital anomaly.²Includes races other than white and black.

NOTE: Excludes data for New Mexico and New York, which did not require reporting of congenital anomalies.

Table 47. Live births by plurality of birth and ratios, by age and race of mother: United States, 1992

Plurality and race of mother	Age of mother										
	All ages	Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15–17 years	18–19 years						
Number											
All live births ¹	4,065,014	12,220	505,415	187,549	317,866	1,070,490	1,179,264	895,271	344,644	55,702	2,008
White.	3,201,678	5,367	342,739	118,786	223,953	814,422	964,586	745,510	282,617	44,866	1,571
Black.	673,633	6,448	146,800	63,002	83,798	216,057	157,960	100,339	39,389	6,453	187
Live births in single deliveries ¹	3,965,759	12,095	498,105	185,194	312,911	1,049,288	1,150,057	867,375	332,754	54,148	1,937
White.	3,124,687	5,312	338,341	117,434	220,907	799,767	941,430	722,142	272,639	43,556	1,500
Black.	654,653	6,382	144,068	62,061	82,007	210,127	152,896	96,773	37,940	6,280	187
Live births in twin deliveries ¹	95,372	125	7,236	2,328	4,908	20,790	28,089	26,434	11,159	1,477	62
White.	73,547	55	4,369	1,341	3,028	14,349	22,147	22,007	9,318	1,240	62
Black.	18,619	66	2,699	932	1,767	5,834	4,966	3,487	1,401	166	–
Live births in triplet and other plural deliveries ¹	3,883	–	74	27	47	412	1,118	1,462	731	77	9
White.	3,444	–	29	11	18	306	1,009	1,361	660	70	9
Black.	361	–	33	9	24	96	98	79	48	7	–
Ratio per 1,000 live births											
All multiple births ¹	24.4	10.2	14.5	12.6	15.6	19.8	24.8	31.2	34.5	27.9	35.4
White.	24.0	10.2	12.8	11.4	13.6	18.0	24.0	31.3	35.3	29.2	45.2
Black.	28.2	10.2	18.6	14.9	21.4	27.4	32.1	35.5	36.8	26.8	*
All twin births ¹	23.5	10.2	14.3	12.4	15.4	19.4	23.8	29.5	32.4	26.5	30.9
White.	23.0	10.2	12.7	11.3	13.5	17.6	23.0	29.5	33.0	27.6	39.5
Black.	27.6	10.2	18.4	14.8	21.1	27.0	31.4	34.8	35.6	25.7	*
Ratio per 100,000 live births											
All higher-order multiple births ^{1,2}	95.5	*	14.6	14.4	14.8	38.5	94.8	163.3	212.1	138.2	*
White.	107.6	*	8.5	*	*	37.6	104.6	182.6	233.5	156.0	*
Black.	53.6	*	22.5	*	28.6	44.4	62.0	78.7	121.9	*	*

¹Includes races other than white and black.²Includes triplets and higher-order plural deliveries.

Technical notes

Source of data

Data shown in this report for 1992 are based on 100 percent of the birth certificates in all States and the District of Columbia. The data are provided to the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program (VSCP). In 1984 and earlier years, the VSCP included varying numbers of States that provided data based on 100 percent of their birth certificates. Data for States not in the VSCP were based on a 50-percent sample of birth certificates filed in those States. Information on sampling procedures and sampling errors for 1984 and earlier years is provided in the annual report, *Vital Statistics of the United States*, Volume I, Natality.

Race

Beginning with the 1989 data year, NCHS has tabulated its birth data primarily by race of the mother. In 1988 and prior years, births were tabulated by the race of the child, which was determined from the race of the parents as entered on the birth certificate. When the parents were of the same race, as was the case for 96.1 percent of births in 1992, the race of the child was the same as the race of the parents. When the parents were of different races and one parent was white, the child was assigned to the other parent's race. When the parents were of different races and neither parent was white, the child was assigned to the father's race, with one exception. If either parent was Hawaiian, the child was assigned to Hawaiian. If race was missing for one parent, the child was assigned the race of the parent for whom race was reported.

The most important factor influencing the decision to tabulate births by race of the mother was the recent revision of the birth certificate, effective with the 1989 data year. This revision includes many more health questions that are directly associated with the mother (for example, method of delivery, medical risk factors for this pregnancy, tobacco and alcohol use during pregnancy, and maternal weight gain). Additionally, many of the other items on the birth

certificate for more than two decades also relate directly to the mother, for example, age, education level, and receipt of prenatal care. In all these instances, it is more appropriate to tabulate births by the mother's race.

A second factor has been the increasing incidence of interracial parentage. In 1992, 3.9 percent of births were to parents of different races compared with just 1.4 percent in 1972. The majority of these births were to white mothers and fathers of another race. There have been two major consequences of the increasing interracial parentage. One is the effect on birth rates by race. Under the previous procedures, the number of white births had been arbitrarily limited to infants whose parents were both white (or one parent white if only one parent's race was reported). At the same time, the number of births of other races had been arbitrarily increased to include all births to white mothers and fathers of other races. Thus, if race of mother had been used, birth rates per 1,000 white women in a given age group would have been higher, while comparable rates for black women and women of other races would have been lower. The other consequence of increasing interracial parentage is its impact on the racial differential in various characteristics of births, particularly in cases where there is generally a large racial disparity, such as the incidence of low birthweight. In this instance, the racial differential is smaller when the data are tabulated by race of child rather than by race of mother. The same effect has been noted for characteristics such as nonmarital childbearing, preterm births, late or no prenatal care, and low educational attainment of mother.

The third factor influencing the decision to tabulate births by race of mother is the growing proportion of births with race of father not stated, 16 percent in 1992 compared with 9 percent in 1972. This reflects the increase in the proportion of births to unmarried women; in many such cases, no information is reported on the father. These births are already assigned the race of the mother because there is no alternative.

Tabulating all births by race of mother, therefore, provides for a more uniform approach, rather than a necessarily arbitrary combination of parental races. This topic is discussed in greater detail in two recent papers (81,82).

Trend data by race shown in this report have been retabulated by race of mother for all years beginning with the 1980 data year. The retabulation provides more uniform data to those analyzing birth data by race, particularly trend data. To facilitate continuity and analysis of the data, trend tables showing data for years prior to 1980 show data for both race of mother and race of child for 1980. This makes it possible to distinguish the effects of this change from real changes in the data. The text in this report focuses on data tabulated by race of mother. When the trend in rates is discussed, the rates are those tabulated by race of mother.

Population denominators

Birth and fertility rates for 1992 shown in tables 1, 3-5, 7, 10, 11, 14, and 15 are based on populations estimated as of July 1, 1992. The population estimates have been published by the U.S. Bureau of the Census (5) and are based on the 1990 census counts by race and age, which were modified to be consistent with Office of Management and Budget categories and historical categories for birth data, and in the case of age, to reflect age as of the census reference date. The modification procedures are described in detail in a census report (83).

Birth and fertility rates by month shown in table 12 are based on monthly population estimates also based on the 1992 census count. Rates for unmarried women shown in tables 14 and 15 are based on distributions of the population by marital status as of March 1992 (17), published by the U.S. Bureau of the Census, which have been adjusted to July 1992 population levels (5) by the Division of Vital Statistics, NCHS.

Birth and fertility rates for the Hispanic population, shown in tables 7 and 11, are based on estimates of the total Hispanic population as of July 1, 1992

(5). Birth data for New Hampshire are excluded from the rates for the Hispanic origin population because this State did not report this information on the birth certificate in 1992.

Computation of rates

In computing birth rates by live-birth order, births with birth order not stated were distributed in the same proportion as births of known live-birth order within each age of mother classification. This procedure is done separately by race. A similar process is followed for computing birth rates by age of father; births with age of father not stated are distributed first within each age-of-mother group.

In computing birth and fertility rates for the Hispanic population, births with origin of mother not stated are included with non-Hispanic births rather than being distributed. In addition, all births to New Hampshire residents are assumed to be non-Hispanic. In 1990, 1.0 percent of the New Hampshire population was reported to be Hispanic (84). Thus, rates for the U.S. Hispanic population are underestimates of the true rates to the extent that the births with origin not stated (1.0 percent) were actually to Hispanic mothers and by the proportion of New Hampshire births that were to Hispanic mothers. The population with origin not stated was imputed. The effect on the rates is believed to be small.

Births by marital status of mother

Beginning with the 1980 data year, national estimates of births to unmarried women have been derived from two sources. In 1992, marital status was reported directly on the birth certificates of 44 States and the District of Columbia. In the remaining six States that lack such an item (California, Connecticut, Michigan, Nevada, New York, and Texas), marital status is inferred from a comparison of the child's and parents' surnames. This procedure represents a substantial departure from the method used before 1980 to prepare national estimates of births to unmarried women, which assumed that the incidence of births to unmarried women in States with no direct question on marital status was

the same as the incidence in reporting States in the same geographic division.

The current method represents an attempt to use related information on the birth certificate to improve the quality of national data as well as to provide data for the individual nonreporting States. An evaluation of this method and its validity for California (the largest nonreporting State) has been published (85). Because of the continued substantial increases in nonmarital childbearing throughout the 1980's, the data have been intensively evaluated by the Division of Vital Statistics, NCHS. There has been continuing concern that the current method might overstate the number of births to unmarried women because it incorporates data based on a comparison of surnames. This is because women who have retained their maiden surname after marriage and who are frequently older, well-educated women, would be classified as unmarried. The results of this evaluation have been generally similar in both the reporting States and the States using inferential data for all races combined. The results differed for white and black births. Between 1991 and 1992, births to unmarried white women increased 1 percent in the States providing inferential data and 3 percent in the States with a marital status item on the birth certificate. Conversely, births to unmarried black women declined 3 percent in the States providing inferential data and declined slightly (0.2 percent) in the States reporting marital status directly on the birth certificate.

Texas births—The number of births to unmarried women in Texas is underreported. As a result of legislation passed in 1989, a birth is considered to have occurred to a married woman if the mother provides any information about the father, or if a paternity affidavit has been filed. The measurement of marital status for Texas births is expected to improve beginning with the 1994 data year, because a direct question on marital status has been added to the Texas birth certificate.

Birthweight

Birthweight is reported in some areas in pounds and ounces rather than in grams. However, the metric system has

been used in tabulating and presenting the statistics to facilitate comparison with data published by other groups. Equivalents of the gram weights in terms of pounds and ounces are as follows:

Less than 500 grams = 1 lb 1 oz or less
 500–999 grams = 1 lb 2 oz-2 lb 3 oz
 1,000–1,499 grams = 2 lb 4 oz-3 lb 4 oz
 1,500–1,999 grams = 3 lb 5 oz-4 lb 6 oz
 2,000–2,499 grams = 4 lb 7 oz-5 lb 8 oz
 2,500–2,999 grams = 5 lb 9 oz-6 lb 9 oz
 3,000–3,499 grams = 6 lb 10 oz-7 lb 11 oz
 3,500–3,999 grams = 7 lb 12 oz-8 lb 13 oz
 4,000–4,499 grams = 8 lb 14 oz-9 lb 14 oz
 4,500–4,999 grams = 9 lb 15 oz-11 lb 0 oz
 5,000 grams or more = 11 lb 1 oz or more

Period of gestation

The 1989 revision of the U.S. Standard Certificate of Live Birth includes a new item, "clinical estimate of gestation," that is being compared with length of gestation computed from the date the last normal menstrual period (LMP) began when the latter appears to be inconsistent with birthweight. This is done for normal weight births of apparently short gestations and very-low-birthweight births reported to be full term. The clinical estimate was also used if the LMP date was not reported. The period of gestation for 4.3 percent of the births in 1992 was based on the clinical estimate of gestation. For 96 percent of these records, the clinical estimate was used because the LMP date was not reported. For the remaining 4 percent, the clinical estimate was used because it was compatible with the reported birthweight, whereas the LMP-based gestation was not. In cases where the reported birthweight was inconsistent with both the LMP-computed gestation and the clinical estimate of gestation, the LMP-computed gestation was used and birthweight was reclassified as "not stated." This was necessary for fewer than 500 births, or 0.01 percent of all birth records in 1992. The levels of the adjustments made for the 1992 data are very comparable to those for the 1991 data.

Computations of percents, percent distributions, and medians

Births with unknown live-birth order, attendant at birth, educational attainment

of mother, nativity of mother, month of pregnancy prenatal care began, number of prenatal visits, birthweight, length of gestation, interval between births, and 1- and 5-minute Apgar scores were subtracted from the figures for total births that were used as denominators before percents, percent distributions, and medians were computed. For birth intervals, the percent distributions also exclude the second- or later-born child in a multiple delivery (interval of 0 months). Percent distributions and the median number of prenatal visits also exclude births to mothers who had no prenatal care. Computations of the median years of school completed and the median number of prenatal visits were based on ungrouped data. An asterisk is shown in place of any derived statistic based on fewer than 20 births in the numerator or denominator.

Random variation

Although the birth data in this report for births since 1985 are not subject to sampling error, they may be affected by random variation in the number of births involved. When the number of events is small (perhaps less than 100), and the probability of such an event is small, considerable caution must be observed in interpreting the data. More information on this topic is included in the Technical Appendix of the annual report, *Vital Statistics of the United States, 1989*, Volume I, Natality.

Related reports

Many of the topics discussed in this report are covered in more analytic detail in other reports published by NCHS. Topics of reports published in the past 5 years include first births to older mothers

(6), low birthweight (86), birth rates by educational attainment (18), twin births (80), and cesarean deliveries (22). Also available is a report evaluating inferred birth statistics for unmarried women in California (85).

Definitions of medical terms

The 1989 revision of the U.S. Standard Certificate of Live Birth includes several maternal and infant health items in checkbox format, including obstetric procedures, medical risk factors, complications of labor and/or delivery, abnormal conditions of the newborn, and congenital anomalies of the child (figure A). The following definitions are adapted and abbreviated from a set of definitions compiled by a committee of Federal and State health statistics officials for the Association for Vital Records and Health Statistics (87).

38a. MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply) <ul style="list-style-type: none"> Anemia (Hct. <30/Hgb. <10) 01 <input type="checkbox"/> Cardiac disease 02 <input type="checkbox"/> Acute or chronic lung disease 03 <input type="checkbox"/> Diabetes 04 <input type="checkbox"/> Genital herpes 05 <input type="checkbox"/> Hydramnios/Oligohydramnios 06 <input type="checkbox"/> Hemoglobinopathy 07 <input type="checkbox"/> Hypertension, chronic 08 <input type="checkbox"/> Hypertension, pregnancy-associated 09 <input type="checkbox"/> Eclampsia 10 <input type="checkbox"/> Incompetent cervix 11 <input type="checkbox"/> Previous infant 4000+ grams 12 <input type="checkbox"/> Previous preterm or small-for-gestational-age infant 13 <input type="checkbox"/> Renal disease 14 <input type="checkbox"/> Rh sensitization 15 <input type="checkbox"/> Uterine bleeding 16 <input type="checkbox"/> None 00 <input type="checkbox"/> Other 17 <input type="checkbox"/> 	40. COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply) <ul style="list-style-type: none"> Fever (> 100°F. or 38°C.) 01 <input type="checkbox"/> Meconium, moderate/heavy 02 <input type="checkbox"/> Premature rupture of membrane (>12 hours) 03 <input type="checkbox"/> Abruptio placenta 04 <input type="checkbox"/> Placenta previa 05 <input type="checkbox"/> Other excessive bleeding 06 <input type="checkbox"/> Seizures during labor 07 <input type="checkbox"/> Precipitous labor (< 3 hours) 08 <input type="checkbox"/> Prolonged labor (>20 hours) 09 <input type="checkbox"/> Dysfunctional labor 10 <input type="checkbox"/> Breech/Malpresentation 11 <input type="checkbox"/> Cephalopelvic disproportion 12 <input type="checkbox"/> Cord prolapse 13 <input type="checkbox"/> Anesthetic complications 14 <input type="checkbox"/> Fetal distress 15 <input type="checkbox"/> None 00 <input type="checkbox"/> Other 16 <input type="checkbox"/> 	43. CONGENITAL ANOMALIES OF CHILD (Check all that apply) <ul style="list-style-type: none"> Anencephalus 01 Spina bifida/Meningocele 02 Hydrocephalus 03 Microcephalus 04 Other central nervous system anomalies (Specify) 05 Heart malformations 06 Other circulatory/respiratory anomalies (Specify) 07 Rectal atresia/stenosis 08 Tracheo-esophageal fistula/ Esophageal atresia 09 Omphalocele/ Gastroschisis 10 Other gastrointestinal anomalies (Specify) 11 Malformed genitalia 12 Renal agenesis 13 Other urogenital anomalies (Specify) 14 Cleft lip/palate 15 Polydactyly/Syndactyly/Adactyly 16 Club foot 17 Diaphragmatic hernia 18 Other musculoskeletal/integumental anomalies (Specify) 19 Down's syndrome 20 Other chromosomal anomalies (Specify) 21 None 00 Other 22
38b. OTHER RISK FACTORS FOR THIS PREGNANCY (Complete all items) <ul style="list-style-type: none"> Tobacco use during pregnancy Yes <input type="checkbox"/> No <input type="checkbox"/> Average number cigarettes per day _____ Alcohol use during pregnancy Yes <input type="checkbox"/> No <input type="checkbox"/> Average number drinks per week _____ Weight gained during pregnancy _____ lbs. 	41. METHOD OF DELIVERY (Check all that apply) <ul style="list-style-type: none"> Vaginal 01 <input type="checkbox"/> Vaginal birth after previous C-section 02 <input type="checkbox"/> Primary C-section 03 <input type="checkbox"/> Repeat C-section 04 <input type="checkbox"/> Forceps 05 <input type="checkbox"/> Vacuum 06 <input type="checkbox"/> 	
39. OBSTETRIC PROCEDURES (Check all that apply) <ul style="list-style-type: none"> Amniocentesis 01 <input type="checkbox"/> Electronic fetal monitoring 02 <input type="checkbox"/> Induction of labor 03 <input type="checkbox"/> Stimulation of labor 04 <input type="checkbox"/> Tocolysis 05 <input type="checkbox"/> Ultrasound 06 <input type="checkbox"/> None 00 <input type="checkbox"/> Other 07 <input type="checkbox"/> 	42. ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply) <ul style="list-style-type: none"> Anemia (Hct. <39/Hgb. <13) 01 <input type="checkbox"/> Birth injury 02 <input type="checkbox"/> Fetal alcohol syndrome 03 <input type="checkbox"/> Hyaline membrane disease/RDS 04 <input type="checkbox"/> Meconium aspiration syndrome 05 <input type="checkbox"/> Assisted ventilation <30 min 06 <input type="checkbox"/> Assisted ventilation ≥ 30 min 07 <input type="checkbox"/> Seizures 08 <input type="checkbox"/> None 00 <input type="checkbox"/> Other 09 <input type="checkbox"/> 	

Figure A. New maternal and infant health items from the 1989 revision of the U.S. Standard Certificate of Live Birth.

Medical risk factors for this pregnancy

Anemia—Hemoglobin level of less than 10.0 g/dL during pregnancy, or a hematocrit of less than 30 percent during pregnancy.

Cardiac disease—Disease of the heart.

Acute or chronic lung disease—Disease of the lungs during pregnancy.

Diabetes—Metabolic disorder characterized by excessive discharge of urine and persistent thirst; includes juvenile onset, adult onset, and gestational diabetes during pregnancy.

Genital herpes—Infection of the skin of the genital area by herpes simplex virus.

Hydramnios/Oligohydramnios—Any noticeable excess (hydramnios) or lack (oligohydramnios) of amniotic fluid.

Hemoglobinopathy—A blood disorder caused by alteration in the genetically determined molecular structure of hemoglobin (for example, sickle cell anemia).

Hypertension, chronic—Blood pressure persistently greater than 140/90, diagnosed prior to onset of pregnancy or before the 20th week of gestation.

Hypertension, pregnancy-associated—An increase in blood pressure of at least 30 mm Hg systolic or 15 mm Hg diastolic on two measurements taken 6 hours apart after the 20th week of gestation.

Eclampsia—The occurrence of convulsions and/or coma unrelated to other cerebral conditions in women with signs and symptoms of pre-eclampsia.

Incompetent cervix—Characterized by painless dilation of the cervix in the second trimester or early in the third trimester of pregnancy, with premature expulsion of membranes through the cervix and ballooning of the membranes into the vagina, followed by rupture of the membranes and subsequent expulsion of the fetus.

Previous infant 4,000+ grams—The birthweight of a previous live-born child was over 4,000 grams (8 pounds 14 ounces).

Previous preterm or small-for-gestational-age infant—Previous birth of an infant prior to term (before 37 completed weeks of gestation), or of an infant

weighing less than the 10th percentile for gestational age using a standard weight for age chart.

Renal disease—Kidney disease.

Rh Sensitization—The process or state of becoming sensitized to the Rh factor as when an Rh-negative woman is pregnant with an Rh-positive fetus.

Uterine bleeding—Any clinically significant bleeding during the pregnancy, taking into consideration the stage of pregnancy; any second or third trimester bleeding of the uterus prior to the onset of labor.

Obstetric procedures

Amniocentesis—Surgical transabdominal perforation of the uterus to obtain amniotic fluid to be used in the detection of genetic disorders, fetal abnormalities, and fetal lung maturity.

Electronic fetal monitoring—Monitoring with external devices applied to the maternal abdomen or with internal devices with an electrode attached to the fetal scalp and a catheter through the cervix into the uterus, to detect and record fetal heart tones and uterine contractions.

Induction of labor—The initiation of uterine contractions before the spontaneous onset of labor by medical and/or surgical means for the purpose of delivery.

Stimulation of labor—Augmentation of previously established labor by use of oxytocin.

Tocolysis—Use of medications to inhibit preterm uterine contractions to extend the length of pregnancy and, therefore, avoid a preterm birth.

Ultrasound—Visualization of the fetus and the placenta by means of sound waves.

Complications of labor and/or delivery

Febrile—A fever greater than 100 degrees F. or 38 C. occurring during labor and/or delivery.

Meconium, moderate/heavy—Meconium consists of undigested debris from swallowed amniotic fluid, various products of secretion, excretion, and shedding by the gastrointestinal tract; moderate to heavy

amounts of meconium in the amniotic fluid noted during labor and/or delivery.

Premature rupture of membranes (more than 12 hours)—Rupture of the membranes at any time during pregnancy and more than 12 hours before the onset of labor.

Abruptio placenta—Premature separation of a normally-implanted placenta from the uterus.

Placenta previa—Implantation of the placenta over or near the internal opening of the cervix.

Other excessive bleeding—The loss of a significant amount of blood from conditions other than abruptio placenta or placenta previa.

Seizures during labor—Maternal seizures occurring during labor from any cause.

Precipitous labor (less than 3 hours)—Extremely rapid labor and delivery lasting less than 3 hours.

Prolonged labor (more than 20 hours)—Abnormally slow progress of labor lasting more than 20 hours.

Dysfunctional labor—Failure to progress in a normal pattern of labor.

Breech/Malpresentation—At birth, the presentation of the fetal buttocks rather than the head, or other malpresentation.

Cephalopelvic disproportion—The relationship of the size, presentation and position of the fetal head to the maternal pelvis, which prevents dilation of the cervix and/or descent of the fetal head.

Cord prolapse—Premature expulsion of the umbilical cord in labor before the fetus is delivered.

Anesthetic complications—Any complication during labor and/or delivery brought on by an anesthetic agent or agents.

Fetal distress—Signs indicating fetal hypoxia (deficiency in amount of oxygen reaching fetal tissues).

Abnormal conditions of the newborn

Anemia—Hemoglobin level of less than 13.0 g/dL, or a hematocrit of less than 39 percent.

Birth injury—Impairment of the infant's body function or structure due to adverse influences that occurred at birth.

Fetal alcohol syndrome—A syndrome of altered prenatal growth and development occurring in infants born of

women who consumed excessive amounts of alcohol during pregnancy.

Hyaline membrane disease/RDS—A disorder primarily of prematurity, manifested clinically by respiratory distress and pathologically by pulmonary hyaline membranes and incomplete expansion of the lungs at birth.

Meconium aspiration syndrome—Aspiration of meconium by the fetus or newborn, affecting the lower respiratory system.

Assisted ventilation (less than 30 minutes)—A mechanical method of assisting respiration for newborns with respiratory failure.

Assisted ventilation (30 minutes or more)—Newborn placed on assisted ventilation for 30 minutes or longer.

Seizures—A seizure of any etiology.

Congenital anomalies of child

Anencephalus—Absence of the cerebral hemispheres.

Spina bifida/meningocele—Developmental anomaly characterized by defective closure of the bony encasement of the spinal cord, through which the cord and meninges may or may not protrude.

Hydrocephalus—Excessive accumulation of cerebrospinal fluid within the ventricles of the brain with consequent enlargement of the cranium.

Microcephalus—A significantly small head.

Other central nervous system anomalies—Other specified anomalies of the brain, spinal cord, and nervous system.

Heart malformations—Congenital anomalies of the heart.

Other circulatory/respiratory anomalies—Other specified anomalies of the circulatory and respiratory systems.

Rectal atresia/stenosis—Congenital absence, closure, or narrowing of the rectum.

Tracheo-esophageal fistula/Esophageal atresia—An abnormal passage between the trachea and the esophagus; esophageal atresia is the congenital absence or closure of the esophagus.

Omphalocele/Gastroschisis—An omphalocele is a protrusion of variable amounts of abdominal viscera from a midline defect at the base of the umbilicus. In gastroschisis, the abdominal viscera protrude through an abdominal wall defect, usually on the right side of the umbilical cord insertion.

Other gastrointestinal anomalies—Other specified congenital anomalies of the gastrointestinal system.

Malformed genitalia—Congenital anomalies of the reproductive organs.

Renal agenesis—One or both kidneys are completely absent.

Other urogenital anomalies—Other specified congenital anomalies of the organs concerned in the production and excretion of urine, together with organs of reproduction.

Cleft lip/palate—Cleft lip is a fissure or elongated opening of the lip; cleft palate is a fissure in the roof of the mouth. These are failures of embryonic development.

Polydactyly/Syndactyly/Adactyly—Polydactyly is the presence of more than five digits on either hands and/or feet; syndactyly is having fused or webbed

fingers and/or toes; adactyly is the absence of fingers and/or toes.

Club foot—Deformities of the foot, which is twisted out of shape or position.

Diaphragmatic hernia—Herniation of the abdominal contents through the diaphragm into the thoracic cavity usually resulting in respiratory distress.

Other musculoskeletal/integumental anomalies—Other specified congenital anomalies of the muscles, skeleton, or skin.

Down's syndrome—The most common chromosomal defect with most cases resulting from an extra chromosome (trisomy 21).

Other chromosomal anomalies—All other chromosomal aberrations.

Method of delivery

Several rates are computed for method of delivery. The overall cesarean section rate or *total cesarean* rate is computed as the percent of all births that were delivered by cesarean section. The *primary cesarean* rate is a measure that relates the number of women having a first cesarean delivery to all women giving birth who have never had a cesarean delivery. The denominator for this rate includes all births less those with method of delivery classified as repeat cesarean, vaginal birth after previous cesarean, or method not stated. The rate for *vaginal birth after previous cesarean* (VBAC) delivery is computed by relating all VBAC deliveries to the sum of VBAC and repeat cesarean deliveries, that is, to women with a previous cesarean section.

This report presents summary tabulations from the final natality statistics for 1992. More detailed tabulations for 1992 will be published in *Vital Statistics of the United States, Volume I—Natality*. Prior to the publication of that volume, the National Center for Health Statistics will respond to requests for unpublished data whenever possible.

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